



Butt, Joshua Richard (2018) Aspects of the automobile's diffusion in the North-West of England 1896-1939. Doctoral thesis (PhD), Manchester Metropolitan University.

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Aspects of the automobile's diffusion in the North-West of England 1896-1939

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A thesis submitted in partial fulfilment of the
requirements of the Manchester Metropolitan
University for the degree of Doctor of
Philosophy

Department of Humanities, Languages and
Social Sciences, the Manchester Metropolitan
University, in collaboration with the Science
and Industry Museum, Manchester

2018

Abstract

This thesis explores aspects of the development of automobilism in the North-West from its beginnings around 1896 to 1939. An investigation of regional source material is used to engage with national and international research on the automobile, and more broadly, science and technology studies and the interaction between technology and society. In doing so, this investigation shows the complexities surrounding the diffusion and technological development of the automobile, focusing on the interactions between users, non-users, designers and dealers. Split into three main chapters, this thesis starts by exploring motoring culture in the North-West, arguing the importance of cultural and social factors in the automobile's diffusion. It then exposes the important role played by commercial prospects and the "imaginaries" surrounding the commercial vehicle in the development of automobilism. Finally, it argues the importance of considering the role of both the small firm and the agent and dealer in the development of automobile technology and automobilism in general. Overall this thesis can be used as a case study for the way in which sociotechnological systems develop, in this case described as "automobilism". It also shows how regional experiences both in design, use, promotion and resistance shape these systems.

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Introduction

This thesis is an exploration of aspects of automobilism in the North-West of England from its beginnings around 1896 to 1939. It aims to go beyond filling the “regional gap” in the UK’s automobile historiography by exploring new regional evidence either to contribute to identified important debates, or by exposing and responding to gaps in our historical understanding of automobilism.

It will attempt to reconcile the growth of the manufacturing industry with the emergence of a technology from obscurity to a ubiquitous consumer product, popular cultural motif, and powerful class and gender symbol. This is important because of the historiographical distance between economic and business studies of the automobile; and social, and cultural studies identified here. This is not a study of an industry within a region, but of the relationship between a region, its businesses and its people and the influence of these factors on the evolution of a consumer product and its use. It engages with theories in the field of science and technology studies which seek to explain the use and development of technologies through understanding the user, the co-construction of technology and the “sociotechnical imaginaries”¹ that have guided use, design and political planning. Theories developed in the field of science and technology studies combined with detailed regional research has been used to challenge some long held assumptions about the diffusion of motoring, the development of the industry and the technological determinist view of the automobile’s adoption.

This thesis explores a wide variety of aspects of the automobile during this period. It takes this wide ranging approach for two reasons. Firstly, based on the literature review, there are a number of areas of automobile studies that can benefit from a user-centred theoretical approach to the automobile. Secondly the fruitful amount of primary source material for the automobile in the North-West covers both a large range of areas of automobilism. I wanted to showcase both this source material and the way in which it can be used to challenge, or enhance existing research. Due to this

¹ A term first coined by Jasonoff, S. and Kim, S., *Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea*, in *Minerva*, Vol.47 (2009). This term and its definition is examined in the literature review.

approach it is beyond the scope of this thesis to explore the wide range of topics in an exhaustive manner. These aspects, although diverse, are drawn together by the theoretical approach which looks at the automobile as a case study for the ways in which society and technology interact.

This thesis is the product of a collaborative doctoral award (CDA) from the Arts and Humanities Research Council (AHRC) with the Science and Industry Museum, Manchester and Manchester Metropolitan University (MMU). The project started with several research questions at the outset which were as follows:

- What was the extent of Manchester's motor industry?
- What was the extent of the rise and decline of the Manchester motor industry to 1939?
- What were its "features" compared with the national context?
- How were products marketed and delivered? What was the extent of the market? Was "northernness", or Manchester's renown as an industrial centre used as a selling tactic?
- What part was played by northern elites (wealthy early adopters, agents, financiers, the corporation) in the industry?
- How did the enthusiast clubs fit in, especially in fostering and promoting the local motoring market?
- What part was played by the northern motor shows, especially in the light of the (London-based) Society of Motor Manufacturers and Traders' attempts to shut the motor shows down?
- Why did some Manchester companies, notably the coachbuilder Joseph Cockshoot & Co., recognise early on the potential of embracing the motor business; and what were their methods for transitioning their business
- Were Manchester companies responding to particular local demand for particular products? Was there a different market in "the north" (for example, for small delivery vehicles or for commercial vehicles) compared with markets elsewhere in the UK?
- How did motor manufacturers foster relationships with agents and dealers, and how innovative were manufacturers in doing so?

By exploring the development of motoring and the motor industry in Manchester, the project's aim was to better understand Manchester's role, and aid the interpretation of the road transport collection at the museum. This included the exploration of specific and unique archive sources, particularly the Cockshoot collection, the archive of a Manchester-based coachbuilder that diversified into the motor industry by building motorcar bodies and becoming a motorcar dealer.² Examination of this archive material along with secondary literature led to a change in emphasis for the project from an industry focus to an approach that first considers why and how people used the automobile. The Cockshoot archive material held at the Museum highlighted the important role played by motorcar agents in linking the manufacturers with customers by paying particular attention to customers' needs. This chimed with newer automobile research, which emphasises the importance of the developing automobile culture in the diffusion of the automobile, and more generally with science and technology studies that highlighted the social construction of technology, the important role of the user and the way in which visions of the future were influential in shaping technological artefacts and social attitudes.

Initial research highlighted a general lack of depth in regional analysis of the British automobile industry. Previous detailed regional studies for the UK have tended to focus on Coventry, the industry's acknowledged centre.³ Yet a study of Manchester and the surrounding region is justified due to the 138 manufacturers identified (Appendix 1), a demonstrably large motoring interest in Lancashire and the diversity of its industry from cars, to commercial vehicles, coachbuilders, motorcycles, cycles, dealers and component manufacturers, as well as the large number of motorists, motoring clubs and other automobile interest groups. Secondly, a regional case study explores sources that are not normally used and thus can help contextualise national and international generalisations, whilst demonstrating regional variations. Originally this study focused exclusively on Manchester. However, as research progressed it

² Science and Industry Museum Archives – Cockshoot collection YMS 0196 and 0197

³ For example, Thoms, D., and Donnelly, T., *The motor car industry in Coventry since the 1890s* (London: Croom Helm, 1985), and Beaven, B., *The Growth and Significance of the Coventry Car Component Industry, 1895-1939* (De Montford University: PhD Thesis, 1994)

became clear that Manchester could not be considered in isolation despite its position as the centre of the industry in the North-West. It shall be shown how other urban and rural areas in the North-West had an important influence on the development of motor manufacture and automobile culture. The interaction between the city and other urban and rural environments forms an important part of this study. For example, Cheshire and its countryside was a popular weekend touring destination for urban automobile users.

The North-West has been chosen because the project started with archive material at the Science and Industry Museum, Manchester. The museum's collections largely originate from the North-West and therefore a focus on the region can best help the museum understand and interpret its road transport-related collection. The period 1896 to 1939 was chosen at the outset of the project because it encompasses the beginning and end of motorcar manufacturing in the region and forms the period in which the road transport collection at the Science and Industry Museum largely sits. 1896 is recognised as one beginning of motor manufacturing, with the passing of the Highways and Locomotives Act of that year. By 1939 Crossley Motors, the last motorcar manufacturer in the North-West had ceased to produce motorcars and instead concentrated on commercial vehicles. Automobile scholarship often divides study by the First World War, focusing either on the pre-1914 period, or more frequently on the interwar period. 1939 is used, by British historians, to mark the end of the interwar period. It is also an end point used by seminal works of automobile history such as O'Connell's *The car in British society: Class, gender and motoring 1896-1939*.

Structure

The thesis has been divided into three thematic chapters: Chapter 1, **the development of motoring culture in the North-West**; Chapter 2, **Commercial Motoring**; and Chapter 3, **the North-West's motor industry**. The thesis has been structured to start with an examination of motoring culture, or more specifically the diffusion of the automobile from a small number of vehicles in 1896, to several million by 1939. Based on the literature review it was identified that understanding how and why the automobile diffused is essential to how the industry developed, and equally how the automobile as

a technology has been shaped by society. Exploring aspects of this culture informs the examination of both commercial motoring in Chapter 2 and the regional motor industry in chapter 3.

Summary of Chapters

Chapter 1 explores several aspects of the automobile's diffusion. This chapter emphasises the importance of social pressures, popular culture, advertising, resistance and the relationship between cycling and carriage culture in the automobile's diffusion. It explores why cycling and cyclists formed such an important cultural group during the early period. It examines why and how two social tiers of motorists developed in the pre-1914 period, the chauffeur-driven large automobile owner and the more modest owner driver, often a motorcyclist, for the interwar period. It also looks at the influence of popular culture and marketing diffusion in the interwar period, while challenging the widely held view that the automobile went from a product primarily used for pleasure to one of utility.

Chapter 2 looks at the understudied area of commercial motoring. It challenges the treatment of the subject as a sub-category of motoring. The emergence of commercial motoring has not really been explained, but has been accepted as a by-product of private motoring and the development of technology. This chapter therefore seeks a different explanation for commercial motoring. It argues that the commercial or the utility, aspect of motoring was central to the acceptance and justification for motoring from the beginning. This was largely through the promotion and belief of a core sociotechnical imaginary: that the automobile, as a technology, can change society for the better, not only through improved personal mobility, but by improving the mobility of goods and services for the betterment of all. This imaginary, championed by automobile interest groups, manufacturers and motorists, influenced businesses, political legislation, and public attitudes. The power of this sociotechnical imaginary is demonstrated throughout the chapter by an examination of the origins of commercial motoring, and its persistent experimental use, despite its failure for many years to demonstrate clear economic benefits or reliability; its growing dominance in the imaginings and actions of city planners; and in the technological replacement of the horse and the tram by the automobile.

Chapter 3 explores the regional motor industry. It considers how a regional statistical analysis can contribute towards our understanding of the national industry, which highlights some deficiencies in data use by previous historians. It looks at the motivations and origins of the often-neglected small firms whose existence as manufacturers was transient yet important. Given the emphasis of previous chapters it looks at how the origins of the industry were influenced by the cultural aspects, as well as the technological aspects of cycling. It explores the motorcar agent and dealer, a forgotten aspect of the industry that served to connect the user and the manufacturer. This chapter argues for their importance, both in the prosperity of firms, but also in the development of the technology. Finally, this chapter looks at whether there were any important regional factors that contributed towards the demise of the industry in the North-West. Evidence shows that, other than the relative strength of labour organisation in Manchester, there was no specific regional explanation for the decline of the regional industry. In many ways its rise and its decline mirror national trends, such as entry and exit levels of automobile manufacturers.

Methods and sources

This study includes an analysis of: manufacturers of motorcars, motorcycles and commercial vehicles; coachbuilders and motor car bodybuilders; garages, dealers and agents; and component manufacturers. These businesses count in their hundreds. Numerous motoring clubs, regional motoring trade groups and defence organisations, as well as trade unions, form part of the evidence of this thesis. This study will not provide a full narrative account of the Manchester automobile industry or its many automobile manufacturers: many of the more significant firms based in the North-West have dedicated publications, such as Rolls Royce, Crossley, Ford and Foden.⁴ Research by A D George has illuminated the histories of some of Manchester's smaller

⁴ For example, Rolls Royce: M. H. Evans, *In The Beginning – the Manchester origins of Rolls-Royce*, Historical Series No. 4 (Rolls Royce Heritage Trust, Derby, 2004); Crossley: M. Eyre, C. Heaps and A. Townsin, *Crossley* (Oxford Publishing Co: Oxford, 2002); Ford: M. Riley, B. Lilleker and N. Tuckett, *The English Model T Ford a Century of the Model T in Britain* (Titus, Wilson and Son: Kendal, 2011); Foden: P. Kennett, *The Foden Story* (Patrick Stephens: Cambridge, 1978)

firms.⁵ But by exploring local sources, and making conclusions about local society and industry, this thesis therefore will interact with regional scholarship.

Quantitative data has been gleaned from surviving company financial records, catalogues for local motor shows, newspapers and trade periodicals including reports of annual general meetings, race meets and share prices. There is a disparity in the survival of material relating to different firms. Quantitative sources such as these are useful for highlighting trends and changing patterns in the Manchester motor industry, but often do not adequately explain the reasons and motivations for decisions and changes. The methodology of this study therefore has been to seek a large range of qualitative sources. A few company archives survive including the Cockshoot collection, the Crossley collection and Quicks collection held at the Science and Industry Museum, Manchester; the Fodens collection at the Cheshire County Records Centre; the Crossley collection at Warwick Modern Records Centre and the Hans Renold collection at Manchester Central Library's Archives.

While these sources are voluminous they represent only a few of the many significant regional firms. For most firms that made up the industry, archival records are either sporadic or non-existent.

Local newspapers have been extensively used, particularly those that are now available for digital search, including the *Manchester Courier* and the *Manchester Guardian*. Other resources, such as motoring periodicals and society magazines, are also available as a digital resource and have been widely used. These include the *Automotor and Horseless Journal*, *Motor Cycle* and magazines like *Punch*, *The Bystander*, *The Graphic* and *The Tatler*. These resources have only recently been made available to scholars and have made this research much easier and richer, especially given the scarce archive resources. Of course, more traditional methods have also been used including manual searches in important motoring periodicals such as *The Autocar* and *The Motor*, and more specific periodicals such as the *Ford Times*.

⁵ Mainly, A. D. George, "The rise and fall of the Manchester motor industry", in D. Brumhead and T. Wyke eds., *Moving Manchester* (Lancashire and Cheshire Antiquarian Society, 2004) pp.194-209; A.D. George, *The Manchester Motor Industry 1900-1938* (Manchester Polytechnic Occasional Paper No.3. 1989)

One of the most valuable quantitative data sources has been the city and suburban trade directories. These have provided dates, addresses, names and products of a range of relevant companies from Manchester's cycle, motor, motor component and coach building industries. Yet they are brief and although they give the number and location of firms, they provide no volume or size statistics. For example, trade directories show that Manchester had 5 percent of the nation's cycle firms in the city. Yet the volume produced by these firms amounted to much less than a 5 percent share in the market. Trade directories can often be out of date, adapting slowly to new industries such as motor manufacturing and often companies are not listed. Therefore, this data has been supplemented with data from motoring publications such as *The Motor* and *The Autocar* who reported on new firms and included adverts for businesses.

Terms

The term "automobile" will be used to describe all forms of road based motorised transport covering motorcars, motorcycles and commercial vehicles. "Commercial vehicles" will also be used frequently and describes a range of vehicles: haulage lorries and vans, buses, taxis, vehicles used for business or advertising, fire engines and ambulances. In Chapter 2 covering commercial vehicles, doctor's use of motoring is discussed. While this can't be described as "commercial", the use of the automobile by professionals such as doctors fits in this chapter because it helps further demonstrate how motoring was imagined to serve society, whether that is by doctors, by businesses, or by local fire brigades (also discussed along with commercial motoring).

The "North-West" is used for what was, during the period of study, the counties of Lancashire and Cheshire, including the cities of Manchester and Liverpool, and North Lancashire towns such as Preston, Blackpool and Barrow. The term "automobilism" will be used frequently to describe the motoring movement that developed during the course of the period of study.⁶ This is generally used instead of "motoring" which is

⁶ Mom, *Atlantic Automobilism* p.38

more suggestive of the actual act of driving and does not convey the way in which the automobile developed such pervasive symbolism and importance in Western society.

“Automobile technology” is used in this thesis to describe in a general sense the many combined technologies that make up the automobile as a complex technological artefact, used for a range of purposes. This is similar to the way in which “digital technology” is used as an umbrella term for many diverse technologies and uses.

Literature review

Before the mid-1990s the historiography of the automobile had been dominated by technical and economic studies that focused on the industry's development. This has been coupled with detailed studies of Britain's most influential marques and prominent motoring personalities. However, more recent studies have considered broader aspects, focusing on the cultural impact of the automobile as a consumer product. Simultaneously theories are continually developing to explain the way in which society and technology interact. New ways of understanding technology and specifically the automobile make a re-evaluation of our understanding of the British motor industry and its development necessary. Furthermore, while previous studies have focused on the national and international level, there is a lack of significant regional analysis that has led to national generalisations going untested. A regional study can serve to provide new insights and challenge existing theories, due to its relatively focused approach and use of new primary sources. The automobile industry in the North-West receives relatively little attention in local studies; this study will offer an examination of the importance of this industry to the region which is often contextualised by its dependence on the textile trade.

A summary of automobile historiography

The historiography of the automobile generally follows two streams of scholarship: economic and business studies on the one hand; and social and cultural studies on the other. Studies in the first field are more numerous and have been influenced by the works of a few historians who have dominated the study of the automobile. Saul's article on the industry to 1914 is the most significant work on the pre-First World War period.⁷ His summary and statistical analysis of the industry is cited by nearly all subsequent scholars and is the basis for several other studies of the national industry. Saul and later Adeney,⁸ Foreman-Peck, Bowden and McKinley,⁹ and Church¹⁰ use statistical analysis, such as entry and exit figures, survival rates and comparative

⁷ Saul, S. B., "The Motor Industry in Britain to 1914", *Business History*, Vol.5 (1962) pp.22-44

⁸ Adeney, M., *The Motor Makers. The Turbulent History of Britain's Car Industry* (London: Fontana, 1989)

⁹ Foreman-Peck, J., Bowden, S., and McKinlay, A., *The British Motor Industry* (Manchester: Manchester University Press, 1995)

¹⁰ Church, R., *The rise and decline of the British motor industry* (Cambridge: Cambridge University Press, 1994)

production figures which have provided scholars with evidence to make several national conclusions and identify trends within the industry. Harrison examined the public flotation and financing of both cycle and motor companies.¹¹ Church explored the marketing approaches of firms.¹² Nicholson extended the analysis to include motoring pre-history, in one of few studies to explore the earliest years of motoring up to 1896, when other analysis often begins.¹³ Other economic studies such as Miller and Church explore the performance of the automobile industry in the interwar years compared with other important industries.¹⁴ Georgano, Wood, Baldwin and Clausager provide a general overview of the UK's motor industry's first hundred years.¹⁵

The strength of these studies lies in their understanding of the automobile manufacturing industry and the economic and technological factors that defined the success and failure of firms. Despite this, their focus on financing and production decisions of firms has led to several conclusions that have only been challenged recently. For example, while they explain the diffusion of the car in the interwar period largely by looking at price and consumer income,¹⁶ this is symptomatic of a general acceptance that the automobile would be in demand if it could be afforded. They also emphasise the role of technological and managerial developments in the success of motor manufacturers due to their economic focus instead of looking at more intangible societal aspects such as relationships with customers and popular public perception. This will be considered when we explore some of the key challenges recently presented by the second stream of automobile historiography.

Important advances in the social historiography of the automobile have come in the past two decades and have changed the way in which the automobile is viewed: from a transportation device, comparable in technological terms to others, to a consumer

¹¹ Harrison, A. E., "Joint-Stock Company Flotation in the Cycle, Motor-Vehicle and Related Industries 1882-1914", *Business History*, Vol.23 (1981) pp.165-190

¹² Church, R., "Markets and marketing in the British motor industry before 1914, with some French comparisons" in *Journal of Transport History*, Vol.3 (March 1982) pp. 1-20

¹³ Nicholson, T. R., *The Birth of the British Motor Car, 1769-1897* (London: Macmillan, 1982)

¹⁴ Miller M., and Church, R. "Motor Manufacturing" in Buxton, N., and Aldcroft, D. eds. *British Industry Between the Wars* (London: Scolar, 1975)

¹⁵ Georgano, N., Baldwin, N., Clausager, A., and Wood. J., *Britain's Motor Industry the First Hundred Years* (Sparkford: G. T. Foulis & Company, 1995)

¹⁶ For example, Church, *The rise and decline of the British motor industry* pp.15-16; Foreman-Peck, Bowden and McKinley (1995) pp.67-76

product and cultural phenomenon. These works have challenged the dominance of technological and economic arguments for the diffusion of the automobile and have instead explored the importance of car culture in explaining the automobile's emergence and growth. O'Connell is foremost as a social study of the automobile in Britain to 1939; in particular his work highlighted the important role that the motorcar played as a class, status and gender symbol.¹⁷ His work has provided a springboard for numerous other studies which explore aspects of gender and class including, variously, Law's study of charabancs and class tourism; Potter's study motorcycling culture; and Horner's exploration of "modest motoring".¹⁸ Both O'Connell and Horner challenge the theory of price and income based diffusion of the automobile previously accepted by scholars.¹⁹ Mom challenges the view that petrol power became dominant because it was technologically superior;²⁰ for example he explores cultural factors such as how electric cars were more viewed as "feminine" in a market where most buyers were male, and how "speed" and "adventure" were important in aspects of consumer decisions.²¹ Jeremiah explores the development of visual and literary culture surrounding the car, providing a consumer perspective by examining artistic representations.²² In America, McShane's study of the emergence of the automobile highlights it as an urban cultural phenomenon explaining its rise through its relationship to urban display, rising suburban culture and utopian traffic planning visions.²³ The car as integral to a modern suburban vision is also captured in Law's study of suburban London where, like O'Connell's analysis, the car was an important status symbol, in which the choice of automobile was important as well as the access it gave to exclusive destinations such as the roadhouse; but Law also emphasises the

¹⁷ O'Connell, S., *The Car in British Society, Class, Gender and Motoring, 1986-1939* (Manchester: Manchester University Press, 1998)

¹⁸ Law M. J., "Charabancs and social class in 1930s Britain", in *the Journal of Transport History* Vol. 36:1 (2015) pp.41-57; Potter, C. T., *An Exploration of Social and Cultural Aspects of Motorcycling During the Interwar Period* (University of Northumbria: PhD thesis, 2007); Horner, C., "'Modest Motoring' and the Emergence of Automobility in the United Kingdom" in *Transfers: Interdisciplinary Journal of Mobility Studies*, Vol.2 (2012) pp.56-82

¹⁹ Horner, "Modest Motoring" highlights the owner driver as distinctively modest compared to the chauffeur driven motorcar owner.

²⁰ Mom, G., *The Electric Vehicle* (Baltimore: John Hopkins, 2004) This view is traditionally held, for example, by Foreman-Peck, Bowden and McKinley (1995) p.17-18

²¹ Mom, *The Electric Vehicle* pp.276-284

²² Jeremiah, D., *Representations of British motoring* (Manchester: Manchester University Press, 2007)

²³ McShane, C., *Down the asphalt path: the automobile and the American city* (New York: Columbia University Press, 1994)

concept of symbolic “modernity” that car ownership represented on an individual level.²⁴

However, foremost in the rise of recent automobile scholarship is the impressive work of Mom.²⁵ The work’s scope is enormous, benefiting from Mom’s ability to combine multilingual historiographies and primary sources in his attempt to explain the emergence, and then the persistence, of the car in the North Atlantic region: the USA and Northern-European countries France, Germany, Holland and the UK. In this exploration of “Atlantic automobilism” Mom challenges what he coins the “Toy-to-Tool” thesis inherent in previous automobile scholarship: namely the acceptance that the automobile started as a toy of the aristocratic elite before becoming a utility vehicle for transport. This paradigm explains the rise of the automobile through both technological advances, and increasing incomes that made automobiles more affordable, comfortable and reliable than previously. The assumption is made that the automobile, superior to other forms of transport, was sure to be adopted if it could be afforded. This is most evident in UK economic history which seeks to explain why American automobile consumption was more advanced than other western countries. Debate surrounds how UK industries’ methods of production resulted in more limited price reductions and therefore limited potential market. In this analysis it is assumed that demand was there as prices dropped and incomes rose.²⁶ Mom argues that this paradigm has defined the previous study of the automobile and his work sets out to counter its dominance by establishing the importance of the tripartite adventures of automobilism “touring, tinkering and racing”. He does so by using literature, film and song which explore motoring culture during its different periods between 1895 and 1940. In using such sources Mom explains the emergence and persistence of automobilism through a study of motives and emotions surrounding use.²⁷

This focus on the user also draws from the developing field of design theory and the field of science and technology studies (STS). The first stream of automobile

²⁴ Law, M. J., *The Experience of Suburban Modernity: How Private Transport Changed Interwar London* (Manchester: Manchester University Press, 2014)

²⁵ Mom, G., *Atlantic Automobilism. Emergence and Persistence of the Car 1895-1940* (New York: Berghahn, 2015)

²⁶ Church, *The rise and decline of the British motor industry* pp.34-45 highlights these debates

²⁷ Mom, *Atlantic Automobilism* p.40

scholarship focused on technical innovation led by designers and manufacturers as an element of business competition; although they recognised that innovation was designed to improve the user experience, the users as a group are passive, their thoughts and actions perceived by designers.²⁸ However research in STS has demonstrated how users of technology have been an active and important part in the design process as the practice and functions of use have influenced design.²⁹ This field highlights for Bijker “both the social shaping of technology and the technical shaping of society.”³⁰ This started with the social construction of technology (SCOT) approach which recognised the users’ role in shaping technological innovation by particular “user groups”.³¹ This emphasis on the user has increased and more recent studies explore how users continually shape technologies and not just in helping to form a stable technology, the focus of the SCOT approach. Automobile case studies in this field include Kline and Pinch’s study of farmers adapting the Ford Model T for many kinds of new user functions.³² Kline, and also Wyatt consider the importance in the social construction of technology of non-users and resisters challenging the assumption that non-users are inevitable future users, and highlighting how resistance influences both the use and construction of technology;³³ this will be demonstrated in our historical case study of automobile resistance in the North-West. Mom has formulated a model for the “co-construction of technology” to highlight the relationship both between the user and the designer and the way in which the functions and properties of the automobile interact and shape each other (Figure 1).³⁴ The automobile also offers an excellent case study for the way in which users influence

²⁸ For example, Foreman-Peck, Bowden and McKinley (1995) pp.47-49

²⁹ For example, see Mom, G., “Translating Properties into Functions (and Vice Versa): Design, User Culture and the Creation of an American and a European Car (1930-70)” in *Journal of Design History*, Vol.21 (2008) pp.171-181 p.172

³⁰ Bijker, W. E., *Of Bicycles, Bakelites, and Bulbs, Towards a Theory of Sociotechnical Change* (London: MIT Press, 1997) p.3

³¹ For example, Pinch, T. J., and Bijker, W. E., “The social construction of facts and artifacts: or how the sociology of science and the sociology of technology might benefit each other.”, in *Social Studies of Science*, Vol.14 (1984) pp.399-431; and Bijker, *Of Bicycles, Bakelites, and Bulbs*

³² Kline, R. and Pinch, T., “Users as agents of technological change: the social construction of the automobile in the rural United States” in *Technology and culture*, Vol.37:4 (1996) pp.763-795

³³ Kline, R., “Resisting Consumer Technology in Rural America: The Telephone and Electrification”, in Oudshoorn, N. and Pinch, T., eds. *How users matter: the co-construction of users and technology* (London: MIT Press, 2003) pp.51-66; Wyatt, S., “Non-Users Also Matter: The Construction of Users and Non-Users of the Internet” in Oudshoorn, N. and Pinch, T., eds. *How users matter: the co-construction of users and technology* (London: MIT Press, 2003) pp.67-80

³⁴ Mom, “Translating Properties into Functions” p.173

the design decisions of manufacturers. This has been demonstrated by Mom, who highlighted the way in which distinctive European and American car cultures have involved the respective development of different technical properties such as the manual and automatic gearbox.³⁵

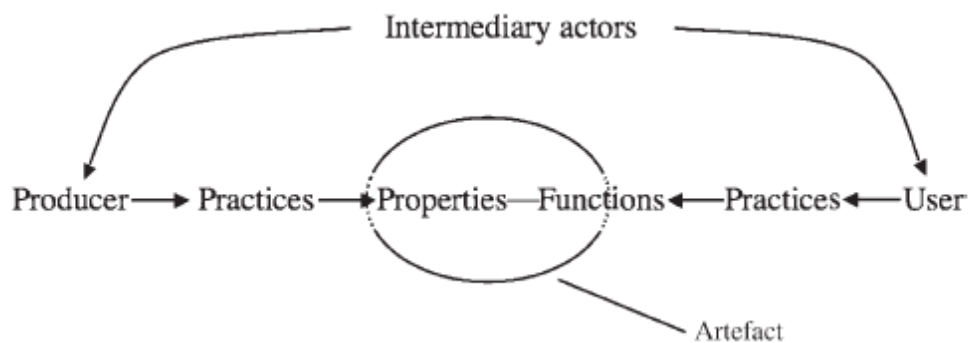


Figure 1 – Mom’s diagram to explain the co-construction of technology - Mom (2008) p.173

Further to the co-construction of technology, Jasanoff and Kim introduced the concept of “sociotechnical imaginaries” as “collectively imagined forms of social life and social order reflected in the design and fulfilment of nation-specific scientific and/or technological projects”.³⁶ This definition has since been refined and extended to include not just national states but “organized groups, such as corporations, social movements, and professional societies”.³⁷ This theory allows for the consideration, not just of users, non-users and designers shaping technology, but how imaginaries inspire and influence policy makers, potential users and politics; and can be used to understand the social weight that gathered behind the automobile that defined the emergence of Atlantic automobilism. In this particular case study we will focus on the way in which sociotechnical imaginaries often surrounded the utility of the automobile, an aspect that has been used to explain the growth of the automobile in the interwar period.³⁸ However the sociotechnical imaginaries were integral to the early acceptance of the automobile, by both policy makers and individuals and as a

³⁵ Mom, “Translating Properties into Functions” p.171-181

³⁶ Jasanoff, S. and Kim, S., *Containing the Atom*, p.120

³⁷ Jasanoff, S. and Kim, S., *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power* (London: The University of Chicago Press, 2015) p.4

³⁸ For example, O’Connell, *The car in British society* p.20 argues that in the interwar period the car became a “necessity rather than a luxury”

theoretical tool sociotechnical imaginaries can be used to explain the development of commercial motoring, not as a by-product of the private vehicle but as a central pillar of automobilism and the imaginaries that surround it (see chapter 2).

The field of science and technology studies provides further key theoretical contributions. More generally, the field as a whole has challenged the “technological determinism” paradigm, which separates technological artefacts as outside of society, and suggests that technological change determines social change.³⁹ Technological determinism has often led automobile scholars to focus too heavily on the automobile as shaping society rather than as an artefact of co-construction. However as Wyatt highlights the concept of technological determinism, although effectively discredited by science and technology scholarship still has an important role by a wide range of influential actors, we see this for example, in this thesis’ exploration of the persistence of the horse and cart (I could also look at this section and modify conclusion based on this).⁴⁰

Generally, the first stream of automobile scholarship predates the second stream. It is argued therefore that the automobile industry and its development need to be re-examined based on the more recent scholarship, both automobile and STS, an example of which is the influence and interconnectedness of the cycle industry on the emergence of motoring. Numerous studies such as Saul, Thoms and Donnelly, and Millward suggest a technical inevitability about the move of companies from cycling to motoring manufacturing, with economic factors such as the end of the cycle boom in the late nineteenth century serving to hasten the move.⁴¹ Yet Mom argues the importance of the cultural link between cycling and motoring. The established “bicycle craze” created a ready culture and experience that allowed the automobile to flourish, despite its negative aspects such as unreliability, noise, cost and smell. These cultural links in the UK are explored by Reid who argues that cycling had a much wider

³⁹ Wyatt, S., “Technological Determinism Is Dead Long Live Technological Determinism”, in Hackett, E. J. et. al. eds. *The Handbook of Science and Technology Studies* (MIT: London, 2008) pp.165-180

⁴⁰ Wyatt, “Technological Determinism” p.175-176

⁴¹ Saul, “The Motor Industry in Britain to 1914” p.26; Thoms and Donnelly, *The motor car industry in Coventry* p.24; Millward, A., *Factors Contributing to the Sustained Success of the UK Cycle Industry 1870-1939* (PhD Thesis: University of Birmingham, 1999) pp.123-126

influence on motoring than manufacturers, or technical characteristics in common.⁴²

This regional case study, therefore considers, not just the origin industries, in an explanation of why motor manufacture began, but the influence of cultural aspects, such as local cycling and motor clubs, journals, trade organisations and attitudes. By considering the cultural experience we can better understand the decisions and organisation of motoring manufacturers, who, especially in the early years of motoring, were motorists and cyclists as well as engineers and designers.

By refocusing on how the user has shaped innovation we can better understand trends in the automobile industry. This can be seen most clearly in the decisions of manufacturers to enter the automobile industry from the cycle industry and the number of “user-designers” experimenting at the turn of the twentieth century, in the activities of regional automobile clubs in the Edwardian period; and in the continual development of specialisations of commercial vehicle manufacturers in the 1930s. These developments demonstrate the importance of user culture in the design and development of the manufacturing industry.

Technological innovation, replacement and preferences

Exploring the diffusion of the automobile also involves the replacement, co-existence or substitution of technology, most notably in this period the horse, but also the electric tram. Studies of the replacement of horse transport by Tarr and McShane for America, and Turvey and Thompson for the UK emphasise economic aspects of this replacement, by showing how businesses generally viewed horses as items of technology that, if not economical, were replaced.⁴³ In the urban environment this is demonstrated by the persistence of the horse throughout the interwar period in the UK where narrow roads, complex intersections and heavy congestion still led to the horse being economically favoured by hauliers. This important debate about commercial motoring and the persistence of the horse is largely absent from the historiography. Commercial motor advocates aggressively promoted the commercial

⁴² Reid, C., *Roads Were Not Built For Cars* (Washington DC: Island Press, 2015)

⁴³ Tarr, J. A., and McShane, C., “The Decline of the Urban Horse in American Cities” in *The Journal of Transport History*, Vol.24:2 (2003) p.192; Tarr, J. A., and McShane, C., “The Horse as an Urban Technology” in *Journal of Urban Technology*, Vol.15:1 (2008) pp.5-17; Turvey, R., “Horse traction in Victorian London” in *The Journal of Transport History*, Vol.26:2 (2005) p.38; Thompson, F. M. L., “Nineteenth-Century Horse Sense” in *The Economic History Review*, Vol.29:1 (1976) pp.61-64

automobile as progressive and a symbol of modernity, often arguing that if only horses and trams were removed from the city streets then the congestion problems would be solved. In contrast, Pooley and Turnbull focus on commuter transport, such as trams, buses and private automobiles;⁴⁴ while Moran, O'Connell and Schmucki concentrate on pedestrians. Pooley and Turnbull's exploration of urban traffic congestion emphasises the "battles between conflicting cultures of transport", which led to the favouring of automobile technology over cheaper more convenient public transport technology. They identify this as part of a "cultural turn" towards automobile technology. This "cultural turn" in the interwar period is also recognised by O'Connell in his exploration of attitudes towards pedestrian safety, as well as by Moran, who looks at the changing influence of public and press opinion in favour of the motorist, at the expense of the pedestrian, and by Schmucki whose analysis of how pedestrian voices were lost, against the push for mass motorisation in the post Second World War period.⁴⁵ This thesis, in turn, explores technological replacement or favouritism by highlighting the sociotechnical imaginaries that surrounded the automobile in the urban environment, furthering the argument that imaginaries of progress and modernity were an important influence on town planning and the actions of authorities over the issues of public transport, and solutions to the traffic problem. Considerations were not always economic when it came to technological substitution.

Carriage trade research is also useful in examining the transition from horse to automobile. Georgano provides an overview of the transitional period in the UK.⁴⁶ However, Georgano's focus is on motorcar body building, thus the work neglects the rest of the coachbuilding industry which included wagonbuilders, cartbuilders, wheelwrights and carriage component manufacturers. However, recent international scholarship by Kinney for the USA, and Tjong Tjing Tai for the Netherlands, has sought to widen our understanding of the adaption of the trade as a whole to the

⁴⁴ Pooley, C. G., and Turnbull, J., "Coping with congestion: responses to urban traffic problems in British cities c.1920-1960" in *Journal of Historical Geography*, Vol.31 (2005) pp.78-93

⁴⁵ O'Connell, *The car in British society* pp.112-149; Moran, J., "Crossing the Road in Britain, 1931-1976" in *The Historical Journal* Vol.49:2 (2006) pp.477-496; Schmucki, B., "Against the 'Eviction of the Pedestrian' The Pedestrians' Association and Walking Practices in Urban Britain after World War II" in *Radical History Review*, Vol.114 (2013) pp.113-138

⁴⁶ Georgano, N., *The Beaulieu Encyclopaedia of the Automobile: Coachbuilding* (London: Routledge, 2001)

automobile.⁴⁷ They highlight a number of issues: the great disparity in the speed of coachbuilders to transition; and the contradiction that coachbuilders were, on the one hand, seen as natural builders of the new horseless-carriage through their woodworking skills, yet, on the other hand, unsuited to the new demands of metalworking and mechanical engineering. They also highlight how the emergence of the automobile affected high-class coachbuilders much more quickly than wagonbuilders.⁴⁸ We can add to this by an exploration of the Cockshoot archives which emphasises the dilemmas of adaptation, the importance of observing changes elsewhere, customer's habits and the contradictions highlighted by both Kinney and Tjong Tjing Tai.

Furthermore, evidence of Cockshoot as motorcar agents highlights a much-neglected area of the manufacturer-user automobile diffusion debate: the salesperson or dealership. While O'Connell and Horner explore the second-hand market for cars, in the interwar and Edwardian period respectively, the sale of new cars has not been adequately investigated which has led to the relationship between manufacturer and dealer being largely ignored. Some exceptions include Church and his study of the Austin Motor Company. Church compared the strategies of different firms, and explored the influence of dealers in relation to business strategy.⁴⁹ Other studies such as Riley, Lilleker and Tuckett highlight the importance of the relationship between dealers and Ford, yet fail to explore the relationship beyond its impact on individual manufacturers.⁵⁰ Dealers were often the first point of contact for customers and important aspects such how these relationships were managed and their influence on sales have been unexplored despite research on the history of individual dealers such

⁴⁷ There have been little research on the UK carriage trade, however there are studies on other countries including Kinney, T. A., *The Carriage Trade: Making Horse-Drawn Vehicles in America* (Baltimore: John Hopkins University Press, 2004) for the USA and Tjong Tjing Tai, S., "Building Carriage, Wagon and Motor Vehicle Bodies in the Netherlands: The 1900-40 Transition", *The Journal of Transport History* Vol. 36:2 (2015) pp.188-208 for the Netherlands

⁴⁸ Kinney, *The Carriage Trade*; Tjong Tjing Tai, "Building Carriage, Wagon and Motor Vehicle Bodies in the Netherlands"

⁴⁹ Church, *Herbert Austin* pp.187-188

⁵⁰ Riley, M., Lilleker, B., and Tuckett, N., *The English Model T Ford. A century of the Model T in Britain* (Keighley: Model T Ford Register of Great Britain, 2008) p.123-124

as Brooks' studies of Manchester firms Cockshoot and Quicks.⁵¹ Pinch has identified salespeople and marketing as "the true 'missing masses' of technology studies" highlighting their role as mediators between users and manufacturers.⁵² Research on car sales has also come from other areas of study. Aspray acknowledged the lack of research on car buying and the buyer experience in his exploration of the history of American car buying.⁵³ Aspray highlighted that even from its inception technical superiority of one car over another was notoriously hard to understand. He identified a range of about 50 or so other influencing factors on the buyers' decision; For example, he emphasised the importance of business integrity and quality service, provided by the agents in the place of the manufacturer. The study of the automobile and the archive material available in the North-West provide an opportunity to examine the role of the agent in automobile culture and the way in which sales and dealers have prompted technological innovation.

Other historiographical gaps

There is not scope in this thesis to explore all aspects of the automobile but being aware of historiographical gaps is useful in understanding what other contributions can be made. The historiography of the automobile is dominated by the study of motorcar use and manufacture at the expense of other aspects of its history such as the component industry, sales and the related cycle, commercial vehicle and motorcycle industries and users.

Beaven highlighted the comparatively under researched car component industry, challenging conclusions of previous scholars, who often restricted analysis of the component industry to a few individual companies.⁵⁴ However, Beaven limited his analysis to Coventry, thus the industry in other areas has been little explored. Writing is confined therefore to company histories such as Whitehead's history of Gardner and Sons, (engine manufacturers) and Tripp's history of Hans Renold Co. (chain

⁵¹ Brooks, R., *Motor Car Coachwork by Cockshoot of Manchester* (Unpublished MA dissertation: Manchester University, 1979); Brooks, R., *Quicks: the first 75 years* (Manchester: H & J Quick Ltd., 1987)

⁵² Pinch, T., "Giving Birth to New Users: How the Minimoog Was Sold to Rock and Roll" in Oudshoorn, N. and Pinch, T., eds. *How Users Matter: the Co-construction of User and Technology* (London: MIT Press, 2003) pp.247-270

⁵³ Aspray, W., "One Hundred Years of Car Buying" in Aspray, W. and Hayes, B. M., *Everyday Information* (London: MIT Press, 2011)

⁵⁴ Beaven, *The Growth and Significance of the Coventry Car Component Industry*

manufacturers), both of which lack contextual analysis.⁵⁵ Since Beaven there has been little further contribution to this field.

The Proceedings of the International Cycling History Conferences (ICHC) have since 1990 provided insights into aspects of the cycle industry, yet there are few studies that focus on cycling links to the motor industry. This is perhaps surprising considering the importance automobile historians have placed on the cycle industry in the origins of the motor industry. Clayton, a regular contributor to the ICHC, is the only local study of the cycle industry.⁵⁶ He provides a history of some of the important Manchester cycle firms and offers an insightful view of the Manchester cycle clubs and the level of interest in cycling in Manchester. However, Clayton fails to link the cycle culture to the industry in Manchester, an approach that led Clayton to conclude: “lacking major cycle makers at the end of the century, the region consequently spawned relatively few local motorcar companies.”⁵⁷ While Manchester certainly lacked major cycle makers, this thesis shows it spawned dozens of motor vehicle companies, which had a prior or parallel relationship with the local cycle trade. As we have seen earlier in our analysis of Mom and Reid, the multiple links between automobile and cycle culture have only recently been identified and explored and this thesis expands upon this.

Dominated by the motorcar, the motorcycle receives relatively little attention. This is surprising as motorcyclists formed the larger part of the motoring population in the UK until the 1920s.⁵⁸ However, there are several studies dedicated to remedying this. Koerner looks to explore the motor industry in the interwar period from a motorcycling perspective.⁵⁹ Marr explores the geography of the industry,⁶⁰ while Potter’s thesis contributes with an exploration of developing motorcycle culture in the

⁵⁵ Whitehead, D., *Gardners of Patricroft: 1868-1968* (Great Britain: Newman Neame, 1968); Tripp, B. H., *Renold Chains: a history of the company and the rise of the precision chain industry 1879-1955* (London: Allen & Unwin, 1956)

⁵⁶ Clayton, N., “A Missed Opportunity? Bicycle Manufacture ring in Manchester 1880– 1900” in D. Brumhead and T. Wyke (eds.), *Moving Manchester* (Manchester: Lancashire and Cheshire Antiquarian Society, 2004) pp.178-193

⁵⁷ Clayton, “A Missed Opportunity?” p.193

⁵⁸ Mom, *Atlantic Automobility* p.294

⁵⁹ Koerner, S., “The British motor-cycle industry during the 1930s” in *Journal of Transport History*, Vol.16 (1995) pp.55-76; Koerner, S., “Four wheels good, two wheels bad: the motor cycle versus the light motor car – 1919-39” in Thoms, D., Holden, L., Clayton, T., eds. *The Motor Car & Popular Culture in the 20th Century* (Aldershot: Ashgate, 1998) pp.151-176

⁶⁰ Marr, P., “The geography of the British motorcycle industry, 1896-2004” in *The Journal of Transport History*, Vol.33:2 (2012) pp.163-185

interwar period, particularly by exploring the activities and membership of motorcycle clubs and concludes that riding skill was more important than social class.⁶¹ Potter also highlights the range and diversity of socio-economic factors that were involved in motorcycle diffusion. However, the focus of this scholarship is on the interwar period, leaving sparse analysis of the pre-1914 period when motorcycling was more popular than the motorcar. This thesis looks to remedy this, by exploring in Chapter 1 motorcycling culture, both its origins and its developing organisation through the Edwardian motoring clubs.

An even bigger gap is presented by the commercial motor vehicle. Mom described the state of research into the use and production of trucks, or commercial motors, as a “black hole in our knowledge”.⁶² Since then there has still been relatively little new research in the field. Recent research tends to focus on the interwar period and the rural environment. For example, O’Connell contributes towards our understanding of the relationship between farmers, their vehicles and the countryside.⁶³ Law has explored motor coaches and charabancs and their contribution to social convergence in the interwar period, allowing the working-classes greater mobility.⁶⁴ Jeremiah also explores the increase in rural traffic, highlighting the way in which the bus was becoming central to rural travel and noting the increasing mobility of small businesses.⁶⁵ Apart from Mom’s research on electric vehicles and their commercial use, there is very little focus on commercial motoring in the urban environment or on the origins of commercial motoring in the pre-1914 period. This is possibly due to certain themes identified by scholarship. Research has shown how the First World War exposed large numbers to motoring and prompted the mass production of vehicles for war use, which were sold for commercial purposes after the war.⁶⁶ However, the focus on the war as the turning point for commercial motoring largely ignores the very long and slow period of experimentation and development from 1896 to 1914; the number of failures both in manufacturing, and in commercial usage, were large, but there were

⁶¹ Potter, *An Exploration of Social and Cultural Aspects of Motorcycling*

⁶² Mom, *The Electric Vehicle* p.205

⁶³ O’Connell, *The car in British society* pp.171-172

⁶⁴ Law, “Charabancs and social class in 1930s Britain” pp.41-57

⁶⁵ Jeremiah, D. “Motoring and British Countryside”, in *Rural History* Vol. 21:2 (2010) p.241 – Also highlighted by the *Commercial Motor* in a sketch 11/9/1925 p.806

⁶⁶ Mom, *Atlantic Automobilism* pp.42-43

also several successful uses for the commercial vehicle. Studying the inception of commercial motoring is important, not only to fill the “blackhole” in automobile studies but in understanding more about the technological and social change during the period, which eventually led to the commercial motoring boom of the 1920s and sealed the demise of the horse-drawn vehicle, but also the social acceptance of the motor vehicle on city streets.

Other areas of automobile literature

In addition to national and international automobile scholarship are regional automobile studies, which largely focus on Coventry as the centre of the industry. Thoms and Donnelly offer a useful comparative study of the development of the industry in Coventry, setting it in a national context from its beginning until 1980.⁶⁷ Beaven complements this by adding an in-depth analysis of Coventry’s car component industry.⁶⁸ Both studies highlight and emphasise themes inherent in national automobile histories. One of the most important conclusions was that Coventry became the centre of the motor industry because the cycle industry was also concentrated in the region.⁶⁹ Manchester and the North-West’s lack of a cycle industry and focus on heavier industries had led to its prominence in the motor industry being dismissed. Yet investigation of primary sources has revealed some issues with these explanations. There is evidence of a small but significant cycle industry, again largely ignored with the exception of Clayton, although he neglects a large proportion of the Manchester cycle industry.⁷⁰ There is also evidence that Manchester’s motor industry was stimulated and not retarded by its traditional heavy industries and that Manchester firms had more diverse origins than those in the Midlands where the automobile industry did predominantly develop from the cycle industry. This suggests therefore that an alternative regional study will be useful in challenging the conclusions made by scholars who focus on Coventry as a case study. Also, the lack of comparative depth in regional studies has led to some errors in information in national

⁶⁷ Thoms and Donnelly, *The motor car industry in Coventry*

⁶⁸ Beaven, *The Growth and Significance of the Coventry Car Component Industry*

⁶⁹ Thoms and Donnelly, *The motor car industry in Coventry* p.38

⁷⁰ Clayton, “A Missed Opportunity?” only mentions a handful of firms, when in fact there were over 200 operating in Manchester before 1906

studies. Chapter 3 will highlight how data and analysis made by Saul in the 1960s and used by subsequent automobile historians does not factor in countless small-scale automobile manufacturers.

Many studies exist that focus on individual marques prominent in the industry. Often marques that survived longer have received much more attention than firms that failed earlier, creating disparity. For example, there are a myriad of publications on Rolls-Royce, Manchester based until 1907, spawned by enthusiasts, owners clubs and the company's dedicated archive service, the Rolls-Royce Heritage Trust. Platforms for Rolls-Royce research include the *Roycean*, "annual journal for those with a serious interest in all aspects of the illustrious Rolls-Royce car company"; *The Rolls-Royce Heritage Trust Historical Series*, a collection of numerous works on the firm; and the *Rolls-Royce Motor Journal* series. Such publications inevitably have a narrow focus. However, the usefulness of such works as a compilation of years of primary research cannot be understated. Works such as Evans offers a detailed examination of the formative years of Rolls-Royce.⁷¹ Other Manchester firms covered less numerously than Rolls-Royce include similar detailed publications, such as *Crossley* by Eyre, Heaps and Townsin; and Riley, Lilleker and Tuckett's *The English Model T Ford*, both of which originated with their owner organisations, respectively the Crossley Register and the Model T Ford Register of Great Britain. Smaller publications such as Lord Montagu's study of Crossley also exist.⁷²

The skew towards these marques can inevitably lead to a lack of emphasis on relatively significant manufacturers such as Belsize, Manchester's largest native pre-First World War motor manufacturer. Likewise, Willys Overland Crossley, Manchester's second largest interwar manufacturer, only receives a mention in conjunction with its parent firm in Eyre, Heaps and Townsin. As well as being wary of the isolated conclusions of single marque research, it is important to consider their influence on other scholarship. For example Clarke's chapter in Bennett's study of the 1900 Thousand Mile Trial examines early motoring in Manchester, but with the focused goal

⁷¹ Evans, M. H., *In the Beginning – the Manchester origins of Rolls-Royce* (Derby: Rolls-Royce Heritage Trust, 2004)

⁷² Eyre, M., Heaps, C. and Townsin, A., *Crossley* (Oxford: Oxford Publishing Company, 2002); Riley, Lilleker and Tuckett (2008); Montagu, Lord, "Bus Ride to Oblivion: the Sad Tale of the Crossley", in *Lost Causes of Motoring* (London: Cassell, 1966) pp.59-76

of explaining how Fredrick Royce might have been influenced by this, despite Royce not becoming involved in the motor industry until 1903, three years after the subject of the publication.⁷³ The larger proportion of firms either have no dedicated publications or are covered by short articles in magazines such as *The Automobile*, which provide small authoritative marque histories. For example Worthington-Williams' article on Marshall and Co. and Belsize,⁷⁴ Wyatt on Century and Eagle,⁷⁵ Worthington-Williams on Bell and CWS,⁷⁶ while George, and Norris and Lomax provide a short history of several firms.⁷⁷ A larger study of Manchester firms can serve to readdress the balance and bias found in marque histories that deal with the city's motor companies and set their examination in a national context.

Plowden is still an important authority for the political aspects of the automobile's development, especially before 1939. Particularly useful is Plowden's research into protective tariffs and the horse-power tax in the interwar era, significant for Manchester-based American manufacturers Ford and Willys Overland Crossley.⁷⁸ Tolliday studies the relationship between labour and motor manufacturers from 1896-1939, when other writers often focus on labour relations post-World War Two. Tolliday notes some regional and company differences during his study.⁷⁹ Despite this Tolliday does not adequately examine the reasons for these regional differences and the influence of counter-union organisations such as the Engineers Employers Federation (EEF). These authors have engaged with and enriched debate in the field of automobile historiography through these different perspectives. By engaging with class, gender, local politics and labour relations in this regional case study we can build our understanding of the motor car industry during this period.

⁷³ Clarke, T., "The 1900 Trail and Manchester: how local motoring spurred the beginnings of Rolls-Royce" in Bennett, E., ed. *Thousand Mile Trial* (East Sussex: Elizabeth Bennett, 2000) pp.173-182

⁷⁴ Worthington-Williams, M., "The Belsize from Manchester" in *The Automobile*, Vol.1:12 (February, 1984) pp.28-32

⁷⁵ Wyatt, R. J., "The Eagle Engineering & Motor Co. Ltd." in *Old Motor and Vintage Commercial* (September 1963) pp.105-109

⁷⁶ Worthington-Williams, M., "Sound as a Bell" in *Old Motor* (1970s) pp.150-157

⁷⁷ George, *The Manchester Motor Industry 1900-1938* and "The rise and fall of the Manchester motor industry"; Norris, J., and Lomax, S., *Early Days: memories of the beginning of automobile engineering in South Lancashire and Cheshire* (Manchester: George Faulkner and Sons, 1949)

⁷⁸ Plowden, W., *The motor car and politics, 1896-1970* (London: Bodley Head, 1971)

⁷⁹ Tolliday, "Management and Labour in Britain 1896-1939" p.41 suggests that Manchester firms, apart from Ford, had high levels of union representation.

Other scholarship explores the infrastructure of motoring, including roads, filling stations and service stations that went side-by-side with the growth of the automobile's popularity. Jeremiah investigates the proliferation of filling stations and petrol pumps, which served the growing number of motorists. These filling stations became a regular part of town and village life during the Edwardian and interwar periods which led to a coherent design philosophy that was in line with the automobile's image as "progressive" and "modern".⁸⁰ Law explores the building of arterial roads and the subsequent rise of the suburban roadhouse in the interwar period. Law's highlights how the new roads built to accommodate motoring became a symbol of modernity and freedoms.⁸¹ Law also shows how the car as a middleclass status symbol of modernity can also be seen in the popularity of the suburban roadhouse in the interwar period. They were not just functional but popular destinations in themselves.⁸² Reid also highlights how campaigning for road improvement amongst motorists was linked with earlier cyclist campaigns for better roads.⁸³ As the automobile grew into the interwar period and post-Second World War to further ubiquity the use of the automobile and its infrastructure began to define town and city geography. For example, Kidd in his study of Manchester's changing geography highlights how railway and tram transport defined residential development up to the Edwardian period, however the increasing use of the automobile led to a much more widely distributed suburban belt.⁸⁴ This is an aspect that will be explored briefly in relation to Manchester in Chapter 2.

Regional industrial historiography

This regional case study must also link with the region's historiography. This is inevitable as those involved in the cycle and motor industries in Manchester had their origins in, and interacted with, the city's other industries, and the residents and

⁸⁰ Jeremiah, D., "Filling Up: The British Experience 1896-1940" in *Journal of Design History* Vol. 8:2 (1995) pp.97-116

⁸¹ Law, *The Experience of Suburban Modernity*, p.93

⁸² Law, *The Experience of Suburban Modernity*, pp.136-137

⁸³ Reid, *Roads were not built for cars*, pp.125-135

⁸⁴ Kidd, A., "From Township to Metropolis" in Kidd, A. and Wyke, T. eds. *Manchester: Making the Modern City*, (Liverpool University Press: Liverpool, 2016) pp.334-336

workers of the region. The main focus of scholarship is on Manchester and Lancashire's dominant textile manufacturing industry, the history of which is covered in works such as Farnie, Timmins, Fowler and Wyke.⁸⁵ These works often track the subsequent birth and development of Manchester's chemical, engineering and metal industries that supported the growing textile industry. This can leave little room for analysis of other industries that worked independently from the textile trade. Timmins' *Made in Lancashire* is one of the most important works that explores the full extent of Lancashire's manufacturing industries. Timmins noted the increasing diversity of Manchester's manufacturing in the late Victorian and early Edwardian period, relative to the slackening growth of the cotton industry.⁸⁶ Timmins explored many different influences on industrial growth, such as local infrastructure, financing and labour skills to explain this.

Manchester's supposed lack of relevant industries e.g. coachworks, cycle industry and other light engineering is accepted too easily outside of regional studies. Lee suggests that the motor industry sprung up in Coventry, Birmingham and the South East because of the diversity of engineering skills in these areas.⁸⁷ Saul concurs, arguing that the Midlands was better suited to the manufacture of cars due to the concentration of light industries that most naturally led to motor manufacture.⁸⁸ Yet work by historians such as Timmins and Wyke, collective volumes such as "Business in the North West", industrial archaeology studies like McNeil and Nevell and national statistical research by Hume suggest that Lancashire's diversity was masked by the relative size of the textile industry.⁸⁹ Important aspects of the city's industry, growing

⁸⁵ Farnie, D. A., *The English cotton industry and the world market, 1815-1896* (Oxford: Clarendon Press, 1979);

Timmins, G., *Four centuries of Lancashire cotton* (Preston: Lancashire County Books, 1997); Timmins, G., *Made in Lancashire: a history of regional industrialisation* (Manchester: Manchester University Press, 1998); Fowler, A., *Lancashire cotton operatives and work, 1900-1950: a social history of Lancashire cotton operatives in the twentieth century* (Aldershot: Ashgate, 2003); Wyke, T., "Rise and Decline of Cottonopolis" in Kidd, A. and Wyke, T., eds. *Manchester: making the modern City* (Liverpool: Liverpool University Press, 2016) pp.69-118

⁸⁶ Timmins, *Made in Lancashire* p.208-209

⁸⁷ Lee, C. H., *Regional Economic Growth in the United Kingdom Since the 1880s* (Maidenhead: McGraw Hill, 1971) p.102

⁸⁸ Saul, "The Motor Industry in Britain to 1914" p.30

⁸⁹ Wilson, J. ed., "Business in the North-West", *Manchester Regional History Review*, Vol.21 (Exeter: Short Run Press, 2009); McNeil, R. and Nevell, M., *A guide to the industrial archaeology of Greater Manchester* (England: Association for Industrial Archaeology, 2000); Hume, J. R., "Engineering" in

especially during the latter half of the 19th and early 20th century included locomotive manufacture, general engineering, electrical engineering, coach building, cycle manufacturing, household goods and foodstuffs and the automobile industry.

Despite the work by the scholars mentioned above these varied industries receive little individual focus. There are a few publications on individual industries such as Mutch's study of brewing in the North-West, and Brown's study of toy manufacturing in the region.⁹⁰ There are also a few studies of individual company histories varying from brief to detailed and which draw upon company archives. The briefer narratives are often celebratory histories that were commissioned for anniversaries. These are particularly weak through lack of analysis and the often-inexcusable application of hindsight. There are many examples of this, but they include Whitehead's history of *Gardners of Patricroft 1868-1968* where the author states "The Gardners knew that the future lay in the internal combustion engine" without an explanation of how they knew this and little evidence to support the statement.⁹¹ Similarly in Cockshoot and Co.'s centenary publication the decision of the coachmaking firm to embrace the motor industry is reduced to a few lines, despite its significance.⁹²

Studies of Lancashire's transport history are numerous, yet suffer, like its industrial histories, from a bias towards certain aspects, especially the canals and railways. Examples include Farnie,⁹³ and Makepeace.⁹⁴ This domination is challenged by Brumhead and Wyke whose work provides a useful collection of essays on other significant aspects of transport in the city such as cycling, motoring and Manchester's

Langton, J. and Morris, R. J. eds., *Atlas of Industrialising Britain 1780-1914* (London: Methuen and Co., 1986) pp.136-139

⁹⁰ Mutch, A. "Brewing in the North West, 1840-1914: sowing the seeds of service-sector management?" in Wilson, J. ed., "Business in the North-West", *Manchester Regional History Review*, Vol.21 (Exeter: Short Run Press, 2009); Brown, K., "'An absorbing epic'? The development of toy-manufacturing in the North West, c1851-1931" in Wilson, J. ed., "Business in the North-West", *Manchester Regional History Review*, Vol.21 (Exeter: Short Run Press, 2009)

⁹¹ Whitehead, *Gardners of Patricroft: 1868-1968* p.12

⁹² Science and Industry Museum Archives – YMS 0197.9/1/ - Cockshoot and Co., *Coachmaking 1844-1944 The Story of a century of service to travellers by road* (1944) p.12

⁹³ Farnie, D. A., *The Manchester Ship Canal and the rise of the Port of Manchester, 1894-1975* (Manchester: Manchester University Press, 1980)

⁹⁴ Makepeace, C., *Oldest in the World: The Story of Liverpool Road Station* (Manchester: Manchester Region Industrial Archaeological Society, 1979)

airfields.⁹⁵ It also notes the interlinked nature of Manchester's transport history, for example the Ship Canal's reliance on its train links, which in turn was of critical importance to businesses deciding to use Trafford Park as a base, and was particularly relevant to Ford's decision to move there in 1911.⁹⁶

The display of material culture at the Science and Industry Museum reflects the dominant emphasis on textile manufacturing and its role in locomotive and aero manufacturing. The road transport collection is displayed in the "Air and Space" gallery, the name highlighting the emphasis of display, as road vehicles are visually much more inconspicuous. The display of material cultural is also influenced by older historiographical trends. Thus, motorcars and economic and technological interpretations dominate the road transport display. Missing are commercial vehicles, or any engagement with the driver, driving experience, resistance to or sale of the automobile.

Wider context of thesis

Automobilism helps define how the present and future of personal mobility technology is directed and imagined. The automobile is at the centre of the imaged future. In Mitchell et. al. study *Reinventing the Automobile: Personal Urban Mobility for the 21st Century*, the automobile is imagined as electric and autonomous, and importantly, that these two technological changes to the automobile, will solve the problems that the current and past automobile has created: namely pollution, congestion and collisions.⁹⁷ This is reflected in the current socio-technical imaginaries and subsequent legislative and business emphasis on this direction for automobile technology. Ultimately this thesis is viewed in this context, and the historical similarities between the beginning of the automobile and today are drawn in the conclusion, pulling together some of the findings of this thesis.

⁹⁵ Brumhead and T. Wyke, *Moving Manchester* (Manchester: Lancashire and Cheshire Antiquarian Society, 2004)

⁹⁶ Brumhead and Wyke, *Moving Manchester* p.28

⁹⁷ W. J. Mitchell, W. L., Borroni-Bird, C. E., Burns, L. D. and Hainle, B. E., *Reinventing the Automobile : Personal Urban Mobility for the 21st Century* (MIT Press: Cambridge, 2010)

Chapter 1 - The development of motoring culture in the North-West

1.1 - Introduction

This chapter explores the development of automobile ownership in the North-West, looking at who owned automobiles and how and why they used them. Exploring the diffusion of the automobile is important because it can help us understand why the automobile, as a form of mobility, a consumable and a symbol, became so ubiquitous and enduring and how as a technological artefact it developed.

Because of the significance of the automobile in the twentieth century, its diffusion has been the subject of much research. This started with the study of economic and political factors in the development of automobile consumerism, including the exploration of manufacturing costs, changing incomes and developing legislation.¹ Since the 1990s “diffusion” research has come to the fore to better explain the emergence and persistence of the car in Western Society.

The emergence of automobile research has underlined the importance of existing modes of mobility, such as the carriage and the bicycle; not just in technical development, but in cultural adoption. Thus the theoretical framework has moved from technological determinism, with the “upgrading” of mobile technology simply happening as the automobile became quicker, cheaper and more comfortable, to social determinism with the automobile instead adopted because it appealed as an “adventure machine” and as a status symbol.² Indeed Mom argued that tinkering, and the unreliability of the early automobile, was an important aspect of its emergence, along with racing and touring, and the ability of the automobile to provide the user with the thrills of speed, and spatial exploration.³ Recent studies of the automobile challenge the theory of technological determinism, and case studies have been used to contribute to building a theoretical framework that argues that we can only

¹ Economic studies such as Saul, “The Motor Industry in Britain to 1914”; Miller and Church, “Motor Manufacturing” and Bowden and Turner, “The Demand for Consumer Durables”

² Mom, *Atlantic Automobilism* p.63; McShane, *Down the asphalt path* p.125

³ Mom, *Atlantic Automobilism* p.63

understand the development and diffusion of technologies by focusing on the users and use of a technology.⁴

The emphasis on cultural arguments for diffusion has challenged the view that the automobile gradually filtered down the social scale, starting as a plaything of the aristocratic elite, before becoming a utility vehicle of the middle-classes in the interwar era, the coined “toy-to-tool” thesis.⁵ Recent research has questioned trickle down diffusion based on income and price. A pre-1914 middle-class motoring movement has been identified as a significant concurrent development to aristocratic adoption.⁶ Similarly working-class motorists have been identified during the interwar period, before the diffusion amongst middle-class groups.⁷ Both these groups were reliant on the relative low cost of the secondhand market. This chapter will provide significant new evidence for the uneven diffusion of motoring, focusing particularly on the motorcycle and the middle-classes in the Edwardian period, two areas which are particularly understudied in automobile research.

Studies that look more broadly at consumerism, middle-class culture, tourism and everyday mobility have shown how the “adventure” of automobilism continued from the period of emergence with aspects such as countryside touring, and the motor in holidaying, prominent in examinations of use throughout the period of this study.⁸ Similarly the argument of utility was continually used to justify the ownership and legitimacy of the automobile rather than necessarily reflecting a fundamental change in the functionality of the automobile.⁹ There is also a focus on ownership as part of

⁴ Particularly the edited volume Oudshoorn, N. and Pinch, T., *How users matter: the co-construction of users and technology* (London: MIT Press, 2003); for specific case studies on the car Kline, R. and Pinch, T., “Users as agents of technological change: the social construction of the automobile in the rural United States” in *Technology and culture*, Vol.37:4 (1996) pp.763-795 on resistance in rural America and Mom (2008) on the different development of car transmissions in America and Europe

⁵ Mom, *Atlantic Automobilism* p.3-7 critiques earlier scholarship that accept the persistence of the car on the basis of its evolution into a tool of utility

⁶ Horner, “Modest Motoring”

⁷ O’Connell, *The car in British society* pp.31-38 highlights working-class car ownership; Potter, *An Exploration of Social and Cultural Aspects of Motorcycling* pp.190-192 explores working-class motorcycle ownership both emphasis the second-hand market and how mechanical knowledge could make purchase and ownership relatively cheap

⁸ Benson, J., *The rise of consumer society in Britain, 1880-1980* (London: Longman, 1994) p.91; Pooley, C. G., Turnbull, J., and Adams, M., *A Mobile Century? Changes in Everyday Mobility in Britain in the Twentieth Century* (London: Routledge, 2005) pp.116-129; Jeramiah (2007) pp.67-83

⁹ Mom, *Atlantic Automobilism* p.639; Plowden, *The motor car and politics* p.173

the middle-class ideal, or as an important marker of middle-class status.¹⁰ This status could be changed depending on the type of vehicle owned, as often the cheapest vehicles were avoided.¹¹

This chapter therefore uses the theoretical framework that has developed around the consumption of technology to examine aspects of automobile diffusion. New evidence provided by this regional case study can be used to critically examine these contributions to our understanding of the automobile, as well as highlight evidence that complicates or expands on previous work.

The first section will explore the relationship between cycling and motoring, and carriage ownership and motoring, as well as the impact of non-users and “resistance” to the introduction of the automobile. Examining new evidence will show that the relationship between the cyclist and the automobile was complex. Evidence shows that cycling infrastructure, such as clubs, periodicals and cycle shops; and practices of touring and racing provided a basis for automobile culture, and exposure to motoring. Yet, an examination of cyclist’s attitudes highlights the social pressures, misgivings and jealousies relating to the new technology. Evidence shows how “resistance” helped to regulate and control the user and the use of the early automobile. Examining carriage users and the automobile show how early automobile adoption was not a technological replacement for the carriage but served as an addition to the upper-class stable.

The second section, “The development of the Edwardian ‘modest motorist’”, argues that a clear two-tier system of motoring developed before 1914, as motoring became an acceptable activity in the middle-class suburban environment. This argument builds upon research that examines middle-class automobile ownership and culture in the interwar period and highlights the origins of many aspects, such as a second-hand market, spectator interest and motorcycling clubs.¹²

¹⁰ Jackson, A. A., *The middle classes 1900-1950* (Nairn: David St. John Thomas, 1991) p.105

¹¹ O’Connell, *The car in British society* pp.22-24

¹² O’Connell *The car in British society*; Potter, *An Exploration of Social and Cultural Aspects of Motorcycling*

The third and final section, “The car, popular culture and middle-class consumption”, uses a case study of the Manchester-produced Model T Ford to show how the automobile’s rise to a ubiquitous consumer product brought the car firmly into popular culture. Ford developed a popular reputation as cheap and therefore undesirable during the interwar period that was in part due to aspects of patriotic consumerism. Analysis will show how Ford tackled these popular associations in marketing campaigns and by adapting technology specifically for the British market, however these strategies were relatively ineffective as their private automobile sales dropped dramatically in the early 1920s. This study of consumerism offers an example of the powerful role that consumer culture played in the design and strategies of manufacturers.

1.2 - The origins of motoring culture

Cycling culture and the adoption of motoring

Historically the link between cycling and motoring has been identified as economically and technologically motivated. However, the impact of cycling culture on automobile ownership has started to be explored by scholars. For example, Mom argued:

there can be no doubt that the “bicycle craze” functioned in creating a set of people, a group culture, and individual experience as a basis for the fledgling automobile culture.¹³

We see this broadly in the similar habits of touring, tinkering and racing and also in the close connections between prominent individuals, firms and campaigns.¹⁴ However, an examination of the grassroots take-up of motoring can build on this research. The evidence shows a complex relationship between the cyclist and motoring, with sources describing their enthusiasm, a sense of kindred spirit, and the joy of speed, but also their envy, the negative impact of motoring on cyclists in terms of new dangers on the road, and the lack of exercise that motoring entailed. While motoring was the ambition of the interested cyclist, it was also scorned by some, who felt that the trade and the press were pushing the motorcycle onto cyclists.

The main sources for this section are journalists and cyclists writing for two local newspapers. The *Manchester Guardian's* “Cycling Notes” column started in 1893 and continued, with decreasing frequency after 1904, until 1912, and the *Manchester Courier's* “Cycling” and later “Cycles and Cycling” section which appeared infrequently in the 1890s and 1900s. The identity of the journalists is not known, so we do not know their background, or even whether the journalists were the same throughout the two decades of publication. These columns kept cyclists up to date with race results, cycle gossip and shared touring routes around the nearby countryside. The “Cycling Notes” column’s regular nature allows us to track the journalist’s gradual exposure to motoring.

¹³ Mom, *Atlantic Automobilmism* p.63

¹⁴ Reid, *Roads Were Not Built For Cars*

Cycling culture has made a big mark on Manchester in the surviving cycling clubs, active Velodrome and notable sports personalities like Chris Boardman (Manchester Wheelers), Adam Yates (Bury Clarion) and Jason Kenny. In the late Victorian period cycling was probably even more popular than it is today. One of the most popular forms was weekend touring with friends or family. Suddenly it became possible to leave the city's suburbs and go many miles and back in an afternoon. This weekend exodus was observed by the *Manchester Guardian's* "Cycling Notes" journalist in May 1896. In one hour around 1500 riders left Manchester on the Chester and Wilmslow Road. 82.3 percent of the riders were in social groups or attached to clubs.¹⁵ Cycling was a social activity and clubs included picnics and games at set destinations.¹⁶ By 1899 Manchester had 49 cycling clubs, representing Manchester and its suburbs, the third highest number nationally after London and Birmingham.¹⁷ Cycling during this period was an upper and middle-class activity, largely dominated by men. For example, in the observations made by the *Manchester Guardian* in 1896, only 5.2 percent of riders were female.¹⁸ It was not until the interwar period that cycling became firmly associated as a working-class activity.¹⁹ It is this largely male, middle-class group that was also particularly susceptible to the arrival of the automobile, although not all could afford it.

From 1896 cyclists were gradually exposed to automobiles through friends and club mates. The Manchester Wheelers tested out a very early motorcycle in 1896.²⁰ In 1899 a prominent member of the Anfield Bicycle Club who turned up with a motor tricycle "was an object of much envy."²¹ This "motor envy" was often created by the novelty value of early automobiles, but it also manifested itself in the relative protection from the elements that a high driving position provided in slushy winter conditions:

¹⁵ *Manchester Guardian* 11/5/1896 only 190 of the 1015 riders on the Chester road were alone.

¹⁶ Lawson, Z., "Wheels Within Wheels – the Lancashire Cycling Clubs of the 1880s and 90s" in Crosby, A. G. ed., *Lancashire Local Studies: in honour of Diana Winterbotham* (Carnegie Pub, Lancaster, 1993) p.128

¹⁷ Clayton, "A Missed Opportunity?" p.183

¹⁸ *The Manchester Guardian* 11/5/1896 p.6 of 1,528 riders leaving Manchester on two of the major southbound roads only 80 were women.

¹⁹ Reid, *Roads Were Not Built For Cars* p.134

²⁰ *The Automotor and Horseless Carriage Journal*, November 1896 p.75

²¹ *Manchester Guardian* 10/3/1899

Motor cars were to be seen, and drivers were envied by many a cyclist as he laboured through the mud.²²

I should have envied the two men on a motor quadricycle whom I met on the Holmes Chapel road on Tuesday. Indeed as it was, I am a little sorry that I was not one of them.²³

The journalist continued to be exposed to motoring through conversations with friends who had bought a machine and being taking a ride as a passenger. In a column in November 1898 the author notes:

at first a cyclist who mounts a motor cycle is fascinated and enthusiastic... the pastime soon palls. A friend of mine who was motor-bitten now tells me he has learnt all there is to on his machine, and is bored by having no work to do.²⁴

The author uses the phrase “motor-bitten” to describe his friend indicating an addictive quality to the experience. This addictiveness can be seen a year later when he acknowledges the pastime is not such a fad:

my most regular riding chum has lately gone in for motoring, I have so far had only one ride – about forty miles – on a motor car; and then I was simply a passenger, not a driver. But the sport was so exciting that I have a positive longing for more.²⁵

The experience of this cyclist is evidence of how cycling began to merge with motoring, through indirect and then direct exposure as more and more club mates and “riding chums” had a go on a motorcycle or motorcar. This exposure manifested itself officially in the creation of motoring sections of cycling clubs, such as the Manchester Wheelers’ Motoring Section which began in 1899 and held joint runs for several years afterwards, such as a run to Over Peover in 1904 attended by 37 bicycles, three motorcars and two motor bicycles.²⁶ Moreover for some club cyclists the motorcycle began replacing the bicycle. The “Cycling Notes” journalist remarked in 1903 of the retiring Manchester Wheelers president:

²² *Manchester Guardian* 22/1/1900

²³ *Manchester Guardian* 27/11/1899

²⁴ *Manchester Guardian* 21/11/1898

²⁵ *Manchester Guardian* 27/11/1899

²⁶ *Manchester Guardian* 23/3/1903

The retired president... an arch-renegade indeed, as he told me that not once last year did he ride an ordinary bicycle, and – worse and worse – does not even possess one now.²⁷

This drift of friends towards motoring was a continual aspect of this period and was noted by the *Manchester Courier* columnist in 1909:

The cyclists drift away into motoring – presently it will be flying – and your old companion of twenty years rushes past you unrecognisable in a cloud of dust.²⁸

Cost was also a serious consideration, however, for many cyclists who could not afford a motor vehicle outright, ownership was still a social ambition, and many started saving for the more affordable motorcycle. This trend was part of the pressure put on cyclists through their social groups, the “Cycling Notes” journalist commenting that: “Some of my friends regard me as unenterprising because I have not yet begun to save up for a motor bicycle.”²⁹ However, there was also evidence of more negative attitudes to the motor bicycle:

Mr G.P. Watson, the captain of the flourishing Cheadle C.C. tells me that the members of his club rather scorn the idea of motorbicycling... Among my own acquaintances – fairly extensive – I frequently hear motor bicycles discussed, but outside the trade I do not know a single rider of one.³⁰

Both journalists were referring to their friends’ experiences and thoughts in several instances. For some motor bicycling was to be scorned as an almost partisan attitude developed, while for others not having the ambition for motorcycling was “unenterprising”. Both views highlight the intensities of social pressure among cyclists. The divisions among cyclists can also be seen in national cycling publications such as the *Cycling Touring Club Gazette* which featured a motorcycling column. Some cycling correspondents to the *Gazette* did not like its sympathetic approach to motoring, with one correspondent resenting the new powers of the motorist: “one cannot, it seems

²⁷ *Manchester Guardian* 12/1/1903

²⁸ *Manchester Courier* 23/4/1909

²⁹ *Manchester Guardian* 12/1/1903

³⁰ *Manchester Courier* 23/3/1903

be both a motorist and a cyclist at heart... two at least of our company have given up cycling – because of the motorist.”³¹

The thrill of speed was an important aspect of the cycling experience. However, the automobile saw an end to the bicycle’s position as the fastest vehicle on the road. This was viewed with mixed feelings by the cycling journalists. One view was that the coming of the automobile may give cyclists immunity from prosecution as the police gained a better perspective on pace.³² This attitude is reflected in a *Punch* cartoon of the era seen in Figure 2. However, another opinion voiced was that the cyclist, no longer the fastest road user, would face new dangers from higher speed motorcars. There was therefore a sense of wariness which also included fears of an increase in traffic, and the *Manchester Guardian* journalist urged cyclists to consider these issues amongst the “enthusiasm of the moment”.³³

³¹ *Cyclist Touring Club Gazette* Oct 1905

³² *Manchester Guardian* 19/3/1900

³³ *Manchester Guardian* 16/11/1896

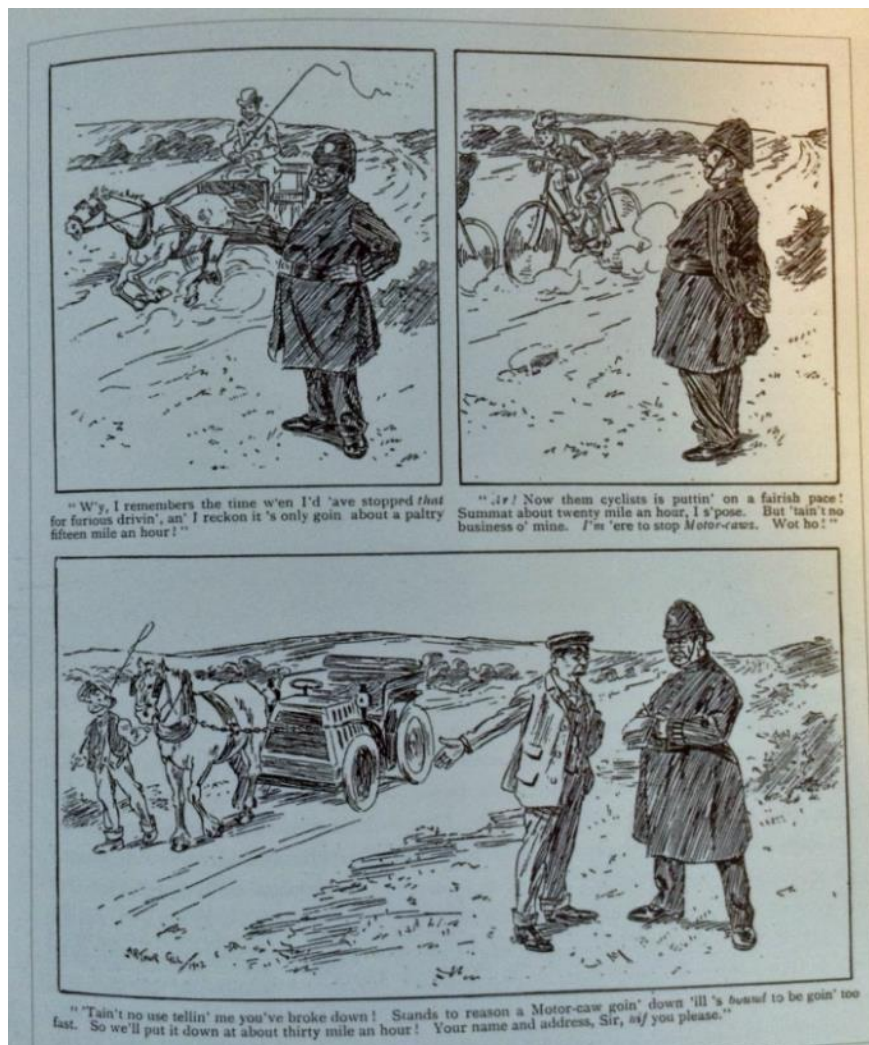


Figure 2 - cartoon illustrating the relationship between new technologies, speed and the police - *Punch* 22/10/1902

However, speed, the excitement of speed and the noise of the engine was clearly a draw for cyclists, as evidenced by the spectacle of racing at Fallowfield in 1900:

Despite the din – perhaps even to some extent on account of it – the motor tricycle events were highly exciting. It is true that they were processions rather than races. But although Jarrott led from start to finish in both instances, he did so at a pace, and took the bends in a fashion that was electrifying.³⁴

The *Manchester Courier* journalist later discusses the dangers of speed by quoting an old cycling friend who became a motorist:

³⁴ *Manchester Courier* 16/7/1900

The instinct for “showing off” the fierce wild joy of rapidly whizzing past everything, leads many motorists to rush past cyclists and pedestrians at top speed.³⁵

In both these instances we see the almost addictive quality of the experience of speed and can understand both the appeal and the reaction against it. Analysis of Kenneth Grahame’s *Wind in the Willows* written in 1906 highlights this addiction to speed through the actions of Toad, and the way in which his friends try to counter the “addictive” and destructive influence of the car.³⁶ In doing so *Wind in the Willows* articulates the anxieties of rural communities who reacted, sometimes violently against this speed that was such a joy to the user, something which cyclists understood.

The influence of the automobile was also felt through changing fashions showing interchangeability between cycle and motor culture:

The example of motor cyclists and autocar drivers is bringing that distressing instrument the cyclorn into vogue again. It went out of fashion some years ago, one hoped forever, but “motorists” felt the need of a more distinctive warning and one of greater sonority than the ordinary cyclist’s bell, and hence the revival. The worst feature of it is that cyclists also are taking to the horn again.³⁷

Cyclists who used the cyclorn, or pneumatic horn, were viewed by other cyclists as “rowdy cads awheel”.³⁸ Similarly respectable cyclists reacted against the caddish motorist and their influence on their fellow cyclist. This highlights the different subcultures of cycling and demonstrates the complexity of bicycle culture. These different subcultures had a variable attitude to the automobile.

The variable attitude of the columnists shows an uneasy relationship with the motor vehicle. Both regarded themselves as cycling purists, and one argument of resistance against the pressure to motorise was the obvious argument “I want exercise”.³⁹ The journalists also viewed reliability as a serious problem. The *Manchester Guardian*

³⁵ Ibid.

³⁶ Mom, *Atlantic Automobilism* p.150-151; Bell, K., “Poop, poop! – An Early Case of Joy-riding by an Upper Class Amphibian” in Thoms, D., Holden, L. and Claydon, T., eds. *The Motor Car and Popular Culture in the 20th Century* (Aldershot: Ashgate, 1998) pp.69-83

³⁷ *Manchester Guardian* 26/6/1899

³⁸ *Athletic News* 20/6/1892

³⁹ *Manchester Guardian* 12/1/1903

journalist thought his friends would struggle, as many had poor mechanical knowledge and thus the thought of tinkering, or rather his ride being interrupted by mechanical problems, was not a desirable aspect of the automobile adventure. This attitude was also mirrored by the *Manchester Courier* journalist who looked on the reliability of the motorcycle humorously:

I have so far met only one of those instruments on the road [motorcycle]. I saw it at Alderley Edge a few Saturdays ago, and the sight made me smile for the man in charge was not driving it – oh, dear no – but walking alongside of it. As it is – what with tyre troubles, men going forth without enough oil in their lamps, and the vagaries of the weather – the humours of cycling would fill a good long chapter. But should motor bicycles become only half as common on the road as many folk... say they will, why then those humours will surely increase sufficiently to fill a volume, if not a regular bookcase.⁴⁰

However, while cycling offered physical exercise the temptation of the motor was clear. When talking about a particularly difficult hill climb the cyclist remarked:

but the next mile or two will make the rider wish that he had an auxiliary motor.⁴¹

The auxiliary nature of the motor can be experienced in the development of motorcycle technology where pedals persisted on motor bicycles for many years. This need for automated help has manifested itself today in the development of relatively light weight and unobtrusive electric motors designed to assist the cyclist with difficult terrain.

It was not just through touring that motor vehicles were introduced to cyclists, but at racing events too. In Manchester the most popular venue was the Fallowfield Track. Cycle racing was very popular, with large crowds recorded over several years during the period, and slowly motoring was introduced. One such example was a Manchester Wheelers race meeting at the Fallowfield Track in 1900 which included a combination of cycle and motorcycle races, watched by a large crowd of 12,000 people.⁴² Other cycling clubs were also including motor racing in their annual competitions, including

⁴⁰ *Manchester Courier* 23/3/1902

⁴¹ *Manchester Courier* 11/3/1901

⁴² *Manchester Guardian* 16/7/1900

the Manchester Athletic Club's 1901 two-mile race. The club restricted entry to 1¾ horse-power entries, so as not to exclude those who could only afford the most basic of motorcycle engines.⁴³ The popularity of cycling as a spectator sport also provided the foundations for the popularity of spectating motor racing in the North-West at places such as Blackpool and Southport, which drew large crowds.

The cycling columns provide a unique insight into the relationship between cycling and motoring that extends our knowledge of cycling and early motoring culture. In our examination we have confirmed the importance of cycling culture and society in the formation of motoring as a popular hobby. Through clubs, races, touring and friends, cyclists of Manchester were exposed gradually to the experiences of motoring which provoked a range of reactions, from envy and excitement to humour and scorn. We see in this the pulls of social pressure; not to save up for an automobile was unenterprising, and if you did not get into motoring then you were in danger of being left behind by the increased speed of the automobile, both in the literal and in the social sense. We also see how cyclists and cycling clubs, as owner-drivers, favoured motorcycles or motor tricycles which saw a boom in club activities and suburban motoring culture, which will be more thoroughly investigated later.

From carriages to motorcars

The nomenclature of motoring in the UK highlights the different cultural and technological influences on the development of the automobile. There was the "horseless carriage", or "motor car", clearly influenced by the carriage users and maker; and the "motor bicycle" or "motorcycle" describing attempts to motorise the bicycle. The uses and users of the motorcycle and the motorcar can be classified as two distinct sub-cultures of the automobile. Motorcyclists have been identified as the larger group of motorists before 1914, although there are important regional variations.⁴⁴ For example, Potter highlighted how in 1932 there were 54 motorcycle clubs in the North-West, compared to 61 in the South-East of England while only 18 clubs in Wales, and just 16 in the South-West of England, suggesting regional

⁴³ *Manchester Guardian* 4/8/1902

⁴⁴ Mom, *Atlantic Automobilism* p.82

differences in the popularity of motorcycling.⁴⁵ Generally motorcycling was more popular in the UK until motorcar registrations overtook motorcycle registrations in the 1920s, as compared, for example, to the USA or France where motorcars were much more dominant.⁴⁶ The historiography of motoring in the UK has not reflected this emphasis on motorcycle use, perhaps because the motorcar became much more dominant in the interwar period and beyond, a much more popular era of study. This has been demonstrated by Potter who looked to address this imbalance through a study of motorcycling culture in the interwar years.⁴⁷ Yet this still leaves the pre-1914 period relatively unexamined, in an era where motoring subcultures began to clearly distinguish themselves. We have highlighted above how the cyclists were crucial in the adoption and development of the motor bicycle. What remains is an examination of the development of motorcar use, which will explore how the motorcar developed as distinct from the motorcycle during the early years of motoring.

Mom distinguishes motorcycle culture as “less elitist”.⁴⁸ The motorcyclist was an owner-driver, whilst the early motorcar owner could often afford staff, mirroring carriage ownership, with a chauffeur. This more elitist use and purchase of the early automobile can be examined through the customer records and actions of local coachbuilder Joseph Cockshoot and Co., separate in many ways from the development in motorcycle ownership. A special letter addressed to shareholders on 23 December 1902 announced the decision that J. Cockshoot and Co. was creating a Motor Department, with the purchase of new premises to support the operation. The letter includes several reasons as to why this step was being taken:

It has been evident for some time past that customers of the firm have been purchasing motor cars in addition to their carriages, and it requires no great amount of argument to show that if that be the case their carriages, used alternatively with motor cars, will last much longer than if they used carriages solely.⁴⁹

The letter suggests that ownership of an automobile without a carriage was unlikely. Indeed, the carriage and the motorcar could easily serve separate functions. Many

⁴⁵ Potter, *An Exploration of Social and Cultural Aspects of Motorcycling* pp.70-71

⁴⁶ Mom, *Atlantic Automobilism* p.294

⁴⁷ Potter, *An Exploration of Social and Cultural Aspects of Motorcycling*

⁴⁸ Mom, *Atlantic Automobilism* p.83

⁴⁹ Science and Industry Museum Archive - YMS 0196/3/6

coach-owners had several different carriages for different uses, with two and four wheelers, gigs, broughams, carrying a variety of different passengers and cargoes. Similarly, there were open top carriages for summer and closed cabs for winter.⁵⁰ This dual ownership of motorcar and horse-drawn carriage emphasises the pleasure and purpose of automobile ownership. Carriages therefore might still be used to provide practical transportation, to the railway station, the church or to visit friends. Indeed, as late as 1907 Rolls-Royce proudly advertised in *The Autocar* that: "A private owner of a R.R. writes: 'may say my car is a perfect dream. It is so reliable that I have done away with my carriages and horses.'"⁵¹ The implication was that carriage owners were not replacing entirely with motor cars.

Elite automobile ownership included the continuation of practices from carriage ownership, which included "stabling" facilities. Cockshoot offered customers facilities to "stable" vehicles at the firm's Deansgate garage, which included sleeping quarters and a billiard table for chauffeurs.⁵² Similarly Cockshoot continued to paint customer's crests on the sides of vehicles: 28 of the first 55 bodies photographed by the firm had a crest emblazoned on the side, and many of these were also pictured with chauffeurs at the wheel. The use of crests is inherited from coach ownership and the surviving Cockshoot book of customer heraldry shows hundreds of examples (see Figures 3 and 4).

⁵⁰ Watney, M., *The elegant carriage* (London: Allen, 1961) p.17

⁵¹ *The Autocar* 20/4/1907 p.15

⁵² Science and Industry Museum archive - YMS 0197/3/3/2 Newspaper cutting from 1903



Figure 3 - The Crest of John Carlisle, who bought a motor car body from Cockshoot in 1905. The crest is most notable for his “HUMILIATE” motto YMS 0196/5/1/9



Figure 4 - The Crest of the Ashworth family used on several carriages and cars bought from Cockshoot. The motto translates “Love Conquers All” - YMS 0196/5/1/9

While the *Manchester Guardian* cyclist's friends were busy saving for their motorcycles, carriage owners were able to purchase automobiles as an "addition" to their stables. This signified an important class divide in the Victorian and Edwardian era between the ownership of a motorcar and a motorcycle. This class divide in ownership complicates the often-simplistic view of early automobilism as an activity for the elite.⁵³ In the next section we will see how the club culture of early automobilism, and the access to the second-hand market further defined the distinction between these two sub-cultures.

Non-users or "resisters"

Recent research has identified the importance of the non-user in shaping the development of technology.⁵⁴ This includes challenges to the assumption that non-users inevitably want to become users of new technologies.⁵⁵ We have already seen how traditional automobile scholarship views diffusion as based on economics, which makes such assumptions for the demand of users. Why then were people opposed to motoring and who were they? Kline defines three actors in the resistance to technologies, those who oppose introduction into a community, those not purchasing and those not using technology in the proscribed manner.⁵⁶ In exploring non-users and resistance to the motorcar we can better understand how technological innovation and use adapted.

In our earlier analysis we looked at the complex relationship between cyclists and the adoption of motor technology. While the motorcar offered a ready extension and social group for the new technology, resistance and experimentation followed by rejection is evidenced through the writings of the *Manchester Guardian* journalist who did not want to save for a motorcycle, unlike his friends, but resisted as the technology had not developed to suit his needs. The first of these he identifies as better reliability

⁵³ O'Connell, *The car in British society* p.11

⁵⁴ For example, Wyatt, S., "Non-Users Also Matter: The Construction of Users and Non-Users of the Internet" in Oudshoorn, N. and Pinch, T., eds. *How users matter: the co-construction of users and technology* (London: MIT Press, 2003) pp.67-80

⁵⁵ Ibid.

⁵⁶ Kline, R., "Resisting Consumer Technology in Rural America: The Telephone and Electrification", in Oudshoorn, N. and Pinch, T., eds. *How users matter: the co-construction of users and technology* (London: MIT Press, 2003) pp.51-66

which was quickly being improved by designers and manufacturers, and the other as exercise, which cycle technology alone could realise.

For Manchester's suburban cyclists, and then motorists, the Cheshire countryside was a popular destination. This generated a high volume of traffic at the weekends which caused friction with local residents and police. Altrincham was a particularly hostile place for both cyclists and motorists and there is evidence of much friction with the police. The "Cycling Notes" columnist noted that:

nowhere in Cheshire are the police and magistrates more hostile to cyclists than in Altrincham.⁵⁷

However other towns on main roads were also hostile:

There appears to be an anti-cycling movement in the neighbourhood of Styal... the main road through which has been all the summer the scene of numerous prosecutions, both just and unjust, on charges of furious riding.⁵⁸

This rural enmity served to connect motorists and cyclists, as the following stanzas of an anonymous poem from 1901 suggests:

A Cheshire Motorist's Story

We that live here in Cheshire,
Have been severely tried
By magistrates' high pressure,
And by police belied.

It matters not if riding
On bicycle or car,
You would see bobby hiding
Before you had gone far.⁵⁹

⁵⁷ *Manchester Guardian* 8/10/1900

⁵⁸ *Manchester Guardian* 22/11/1897

⁵⁹ *Motorcar Journal* 14/12/1901 p.753

The rural opposition experienced by motorists was nothing new, as cyclists had faced the same hostility for several years. Police actively sought prosecutions and locals called for a tax on cyclists, who were viewed as a rural nuisance.⁶⁰ The attitude of rural residents in Cheshire mirrors that of the popular London touring counties of Surrey and West-Sussex who were known for their hostility to both the bicycle and the car, the Automobile Association remarking that these counties were also those prosecuting cyclists in the early days of cycling.⁶¹ This shows how cycling and motoring were linked through urban ownership and rural use as London owners went to the home counties, while Lancashire town and city owners turned to the Cheshire countryside.⁶²

Evidence from the North-West and elsewhere supports the argument that class antagonism was the main reason for resistance: the invasion of the upper and middle-classes into social street space, endangering with speed, both in the rural and urban environments.⁶³ Research shows how Cheshire was the scene of official resistance to the “invasion” of the bicycle and automobile through police activity and regular prosecutions. For example, there were 183 successful motoring convictions in Cheshire in 1905.⁶⁴ Cheshire was also the scene of other incidents which confirm the class, rural-urban conflict. The Manchester Automobile Club (MAC) conducted many club runs in the Cheshire countryside. One such run involved the following incident:

The only mishap at present recorded in connection with the run was the murder, wilful or otherwise, of a duck by Mr Fred Hammond. It was one of a number which impeded his progress, and it was highly amusing to witness the owner holding the duck which she said was a pet of the family, in front of her by the neck, when she afterwards appeared and demanded compensation. This was at once given in a novel way by an

⁶⁰ *Manchester Guardian* 28/6/1897

⁶¹ Mom, *Atlantic Automobilmism* p.75; Laybourn, K. and Taylor, D., *The Battle for the Roads of Britain: Police, Motorists and the Law c.1890s to 1970s* (London: Palgrave Macmillan, 2015) p.48

⁶² Mom, *Atlantic Automobilmism* p.63

⁶³ Mom, *Atlantic Automobilmism* p.75; see also Moser, K., “The dark side of automobilism” in *Journal of Transport History*, Vol.24:2 (2003) pp.238-258

⁶⁴ *Manchester Courier* 16/7/1906

impromptu auction, at which the duck fetched 2s. 6d., to the evident satisfaction of the owner.⁶⁵

Told from the motorist's perspective these episodes have a strong bias, in which the voice of the rural resident can only be inferred. The motorists' perspective however is telling, and the slaughter of livestock or a "pet" is made light of. Indeed, it is acceptable that this "murder" could have been "wilful" because of the high number of animals on the road. It is also the regard of the motorists that the owner was satisfied with monetary compensation. Thus, we see clearly how both class and rural antagonism were part of resistance which included incidents such as that described by the aristocratic motorist Leopold Canning on a test run of an Eagle motor tricycle in 1901 in the Cheshire countryside:

We were coming up to a farmhouse where a knot of men stood with some horses and carts by the side of the road. They were all big, hulking ruffians, and as we approached them a burly fellow stepped on to the road and picked up a big stone. This he hurled at us with all his might as we went by, but thanks to our forty miles an hour it just missed us. If it had struck either the machine or ourselves it would have done considerable damage, and had there not been so many of them we should have stopped for a little talk with them, but six were too many for us two to handle. In France I always carry a revolver with me, and there I would probably have fired at the man for his pains.⁶⁶

Notable here apart from the violent attitudes of both motorist and non-motorists is the extreme speed at which Canning suggests travelling, three times over the speed limit of the day. The link between speed, violence, motoring and class confrontation evident here, and forms part of the appeal of motoring.⁶⁷ The reaction against speed, both anarchic, and official had an influence on legislative debates of the day which were driven by the complaints of rural councils, including the numbering of cars and the reduction of speed limits.⁶⁸ This came to a head during the early 1900s both leading up to and following the introduction of the Motorcar Act of 1903. This included heated debate in the West Riding of Yorkshire where speed, such as that travelled at by Leopold Canning was hotly objected to as the "insolence and arrogance of those

⁶⁵ *Autocar* 30/8/1902

⁶⁶ *Motorcar Journal* 20/12/1901

⁶⁷ Moser, "The dark side of automobilism" p.247

⁶⁸ Plowden, *The motor car and politics* pp.33-34

who drove those powerful motorcars.”⁶⁹ Meanwhile Rochdale council, following the 1903 Motor Act, called for further powers for local authorities to regulate motor traffic.⁷⁰

Resistance to the motorcar was also evident in urban non-users. However, the reasons for resistance were similar, with the automobile’s invasion of the urban space. A motorcyclist on an evening ride out of town in 1906 recounts a breakdown and an encounter with a local resident:

He informed me that it was a private right of way, and that I must clear out at once, that the whole avenue was being disturbed with the noise of the explosions, and that his children could not get to sleep.⁷¹

Figure 5 shows a drawing of an automobile in Manchester in 1906 by Roger Oldham which was accompanied by a poem as part of an alphabetical series called *A Manchester Alphabet*:

M for Motor Car
The face and pace of Manchester
Have many changes seen,
From the grass of Angel Meadow
And the blades of Ardwick Green’
From the Pack Horse and the Pillion
And “the ancient Seven Stars,”
To the modern mammoth Midland
And the monstrous Motor Cars.⁷²

⁶⁹ *Yorkshire Post* 9/7/1903

⁷⁰ *Yorkshire Post* 8/9/1905

⁷¹ *Manchester Courier* 16/4/1909

⁷² Manchester Art Gallery - 1963.25/M Artwork by Roger Oldham

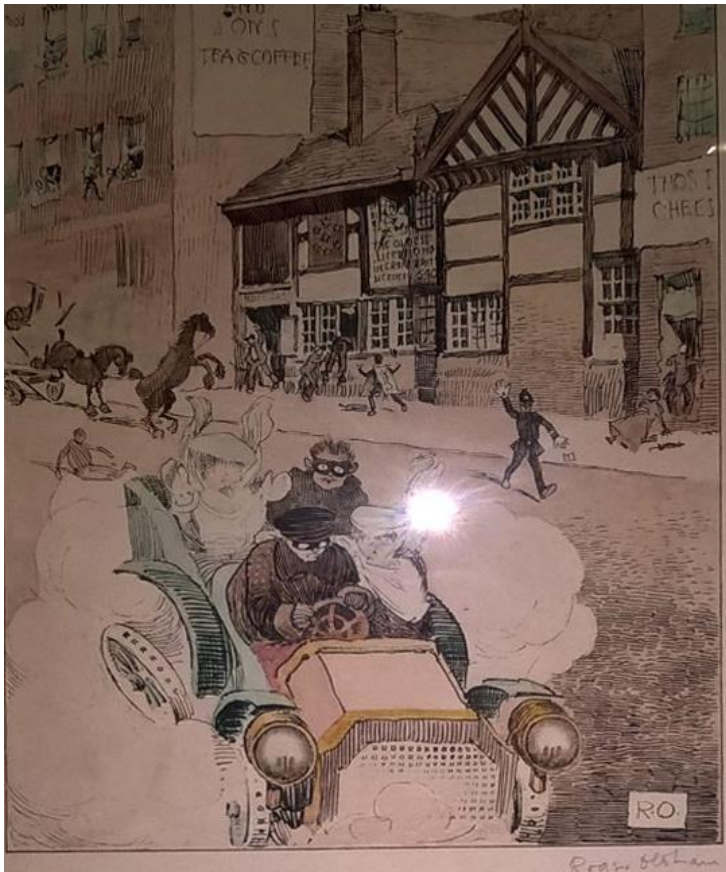


Figure 5 – “M is For Motorcar” Artwork by Roger Oldham 1906 – Manchester Art Gallery - 1963.25/M

Prominent in this work is the disruption caused to the other road users. This includes pedestrians outside a pub, a horse and cart, and the unreliability and noise and visual disruption are also shown with the rear wheel falling off and steam, or smoke billowing out. The potential violence of the motorcar is captured in the poem with the description of “monstrous”. The “monstrous motor car” is followed by the next drawing, Figure 6, which shows a newly registered motorcar being noted by a policeman, as the new technology started to be controlled and users regulated.

In response to resistance users began to restrain their driving attitudes. This included motoring publicity ventures such as the Thousand Mile Trial of 1900, which passed through both Cheshire and Manchester. The organisers writing to competitors urged: “we earnestly beg the drivers of vehicles not to exceed the legal limit of speed and to

show the greatest consideration to the drivers of restless horses and other users of the road.”⁷³ While local clubs also urged members to set a good example:

In view of the approaching motor-car legislation and of the present state of public opinion the committee of the Manchester Automobile Club has issued to their members a circular appealing to them to see that the speed of their cars is reduced to a really low limit in meeting or overtaking traffic, in passing through populous places or villages... on dusty days, for this reason alone, speed should be lowered... if consideration is not used, especially at the present time, legislation that will spoil the pastime and injure the trade is sure to result.⁷⁴

This is a clear example of how non-users influence legislative change, user’s attitudes and ultimately the manufacturing and design of automobiles. Automobile clubs and manufacturers combined through specialist trials to attempt to engineer solutions to many of the annoyances of motoring including sideslip and dust raising. For example, the Royal Automobile Club’s dust trials of 1908 highlighted that low bodied cars with few obtrusive features created a smaller dust cloud.⁷⁵

⁷³ Bennett, E., *Thousand Mile Trial* (East Sussex: Elizabeth Bennett, 2000) p.33

⁷⁴ *Manchester Courier* 4/7/1903

⁷⁵ *Brighton Gazette* 22/4/1908



Figure 6 – “N for Motorcar Number”; Artwork by Roger Oldham 1906 – Manchester Art Gallery - 1963.25/N⁷⁶

Kline and Pinch’s study of automobile opposition in rural America argues that:

the anticar feelings were obviously intense, but also transient, and disappeared for the most part when manufacturers introduced cars that were economical and met the criticism of the ‘anti’s’.⁷⁷

In examining the anti-motoring feeling in the UK and the North-West we see an evolution of the anti-car attitude. While resistance became less violent, by the interwar period the automobile had adapted into a vehicle that had the utility of use that made it desirable for rural residents, especially by farmers.⁷⁸ The anti-car movement evolved to concern itself with the preservation of the countryside. As the automobile became a more common sight and roads improved, dust and unfamiliarity became less of an issue, while the menace of litter, noise and the scars of motoring infrastructure such as roads and garages became the concern of organised non-user

⁷⁶ N was also the suffix allocated to Manchester for local automobile registrations

⁷⁷ Kline and Pinch, “Users as agents of technological change” p.782

⁷⁸ O’Connell, *The car in British society* pp.170-175

resistance, along with the growing pedestrian concern for safety.⁷⁹ We see therefore how new technologies such as the automobile were developed as part of a complex relationship of social groups, as both the user and the non-user shaped both technological change to increase reliability, decrease dust, improve roads, affect legislation and adjust the habits of motorists by defining what was, and what was not, acceptable behaviour that brought motorists to account.

Conclusion

Mom argued that:

the car's early role was very flexible, and as a "collective symbol" its functions and its properties were quite diverse.⁸⁰

The diversity of early automobilism has been demonstrated in this section in the examination of the differing influences of bicycle and carriage culture, and the differing attitudes of early motorists and non-motorists. This diversity and flexibility will also be demonstrated in Chapter 2 where the visions for the automobile among many businesses and businessmen differed, for example, from those looking to the automobile as a touring, or adventure machine. While technological influences have been noted by several economic historians, the cultural influence, of the carriage, or the bicycle, have only just begun to be explored in automobile historiography. By exploring cultural influences, we can complicate the view that bicycle manufacturers became motorcycle or motorcar manufacturers because of technological closeness;⁸¹ but also because their customers were exploring different methods of touring, or racing. Explaining why so many began to manufacture motor vehicles so early on will be explored in Chapter 3. In the next section we will extend the analysis of the early development of automobilism by exploring the "modest motorist" which developed alongside the more elite automobile culture.

⁷⁹ O'Connell, *The car in British society* pp.112-149; p.158-170

⁸⁰ Mom, *Atlantic Automobilism* p.62

⁸¹ A view generally held by economic automobile historians. For example, Saul, "The Motor Industry in Britain to 1914" p.26 and Beaven, *The Growth and Significance of the Coventry Car Component Industry* p.40

1.3 - The development of the Edwardian “modest motorist”

Motoring in the North-West gained momentum during the Edwardian period. By 1912 there were an estimated 30,000 motorists in a twenty-five-mile radius of Manchester, a suggested 150,000 who were interested, and 2,000 motorists were registered in the Manchester registration district during 1912.⁸² Automobile diffusion was increasing, but compared to the two million cars registered by the end of the interwar period, the overall number of vehicles was still modest. This difference has led scholars to conclude that the period before 1914 is typified by the ownership of the aristocratic elite.⁸³ Economic arguments are used to justify this difference; that production techniques and scale of production, coupled with distribution networks lowered the price and thus was affordable for those lower down the social scale, whose incomes were rising, during the interwar period.⁸⁴ However, these conclusions are often driven by a focus on motorcar production, and motorcycles and their users during this period are relatively unexplored, despite being the more numerous types of vehicle and user; motorcycle registrations were higher compared with motorcar registrations in UK until 1925.⁸⁵

Horner highlights the rise and promotion of “modest motoring” during this period. The modest motorist was middle-class, self-driven, owner repairing and thus distinctive from the chauffeured upper-class or the racing driver.⁸⁶ This movement was significant for the emergence of middle-class motoring which was well established in the interwar period. Research on the interwar period highlights the important role of motorcycle clubs as uniting those with common interests, motorcycling forming part of a growing trend for sporting activities during the period, as racing also developed into a popular spectator sport.⁸⁷ Potter goes on to identify regional variation in the pursuit. In 1932 there were for example 54 motorcycle clubs in the North-West, significantly more than in areas such as Wales, the South-West and the North-East.⁸⁸ This section will look at

⁸² *Manchester Courier* 26/2/1913

⁸³ O’Connell, *The car in British society* p.11 describes motoring in Edwardian Britain as an elite activity,

⁸⁴ O’Connell, *The car in British society* pp.19-20 summarises these arguments

⁸⁵ O’Connell, *The car in British society* pp.17-18; Koerner, “The British motor-cycle industry during the 1930s” pp.55-76

⁸⁶ Horner, “Modest Motoring” p.57

⁸⁷ Potter, *An Exploration of Social and Cultural Aspects of Motorcycling* pp.50-51

⁸⁸ Potter, *An Exploration of Social and Cultural Aspects of Motorcycling* p.70

further evidence for the Edwardian “modest motorist” and look at the Edwardian origins of club and middle-class leisure culture. This section will argue that there developed during this period two distinctive ends to the motoring spectrum. Culturally there was a difference between the motorcycles, linked more with the bicycle, than the chauffeur driven large car, linked more to upper-class carriage culture.⁸⁹ Mom also notes widely differing diffusion patterns of the motorcycle and the car in different countries, which cannot be explained solely using economic arguments.⁹⁰ This section will argue therefore that the diffusion of motoring was not necessarily based solely on an income-to-price scale but was dependent on the developing culture of the more “modest motorist”. Part of this is linked to the rise in the number of local motoring clubs and local membership, whose numbers boomed and became an important part of middle-class suburban culture; and part is down to the establishment of motoring facilities that made it easier for more modest motorists to enjoy touring the countryside with reasonable ease. Rather than focus on the more exclusive and well researched national organisations like the RAC, this section will explore the local, middle-class motor clubs that sprang up during this period.⁹¹ This section will also explore the spectator, as we see the growth of regular racing competitions.

What businesses were catering for the “modest motorist”? In chapter 3 we will explore the rise of numerous small-scale cycle shop producers that served the numerous local cyclists and cycle clubs that were also beginning to get acquainted with the automobile at the turn of the century. We have already noted the influence of “motor envy” felt by those cyclists whose club mates had “gone in for motoring”. This “motor envy” was accentuated by the fact that motoring might be out of the reach of some cyclists who could not afford a motorcar or motorcycle. What then, was the “modest motoring” scene in the North-West? As the industry matured the second-hand market, the growing motorcycle market and the cyclecar market from about 1910, started to cater for this more modest motorist who could not afford a “proper” motorcar, let alone a chauffeur or a mechanic. One of the most important aspects in this cultural divergence was the growing motor club scene, which was also participated in by those involved in

⁸⁹ Mom, *Atlantic Automobilmism* p.83

⁹⁰ Mom, *Atlantic Automobilmism* pp.292-293

⁹¹ The RAC and their upper-class origins and expensive membership have been covered in works such as Brendon, P., *The Motoring Century: The Story of the Royal Automobile Club* (London: Bloomsbury, 1997)

the local motor industry, a factor identified by the cycling journalists. Motoring was becoming much more popular, and less of a novelty, and much more acceptable as a middle-class pastime, both in terms of cost, and respectability.

Establishing motoring as a normal middle-class pastime

Simultaneous to the growing popularity of motoring amongst the upper and middle-classes, and the growth of clubs was the growth of motoring infrastructure, in terms of road improvement, signage, garages and petrol supplies. In Manchester and Salford what started as one or two garages (such as the pioneering Manchester Motor Corporation, Manchester's first garage founded in 1899) expanded and many cycle repair shops and agencies were listed in the local trade directories with "(and motorcycles)" added. By 1909 there was a total of 15 motor car garages listed.⁹² There were also established insurance companies offering standard motor insurance, and accessory businesses offering motor paraphernalia.⁹³ Motoring had entered the high street with shops and repair facilities not just in the city centre but also in the suburbs, thus closer to the homes of motorists. For example, by 1909 there were 11 automobile dealers or garages on Manchester's main shopping street, Deansgate, with several more listed on adjacent shopping streets such as King Street and Bridge Street.⁹⁴

These changes were accompanied by a growing level of motoring journalism.

Dedicated motoring columns in the regional papers became both more common and more detailed during the Edwardian period. These often merged with the cycling columns to form joint coverage, before motoring was covered alone. For regional papers this started with borrowing "motoring notes" from national sources, before adding a regional section, which then developed into a full regional motoring column. The most typical and largest in the North-West was probably the *Manchester Courier's* "Motors and Motoring" column, which started weekly from May 1903 because of the "great and increasing interest taken in automobilism".⁹⁵ This column was used by

⁹² *Slater's Manchester, Salford and Suburban trade directory* (Slater's Directory Limited: Manchester, 1909)

⁹³ *Slater's Manchester, Salford and Suburban trade directory* (Slater's Directory Limited: Manchester, 1909)

⁹⁴ *Slater's Manchester, Salford and Suburban trade directory* (Slater's Directory Limited: Manchester, 1909)

⁹⁵ *Manchester Courier* 27/5/1903

several regional newspapers and was written by London based journalist J. P. Holland.⁹⁶ This was later complemented between 1907 and 1908 by a “Local Motor Notes” column and then “Northern Motor Notes” between 1908 and 1913 written by local journalist and motorist J. T. Ward. The national column was dropped by 1913 and the remaining column became larger, written solely for the local audience, who got their national motoring news from subscriptions to the increasing number of national motoring publications.⁹⁷ There were also columns in other northern papers such as the *Preston Herald*, the *Liverpool Daily Post*, the *Manchester Guardian* and the *Bolton Evening News*. Over time these developed regular features, such as the *Manchester Courier’s* “Local Road Information” section, noting road repairs and changes and included safety advice such as lights at night or the protection of obstacles.⁹⁸ This reflected the growth of motoring and mirrored the rise of local clubs, whose doings featured prominently in these columns. Motoring columns were often accompanied by adverts from local agents and manufacturers, especially around the time of the national show in the autumn and the Manchester show in the winter. The growing motoring sub-cultures are also identified through national publications, particularly *The Motor Cycle* first published in 1903, and *The Commercial Motor* published in 1905. The *Manchester Courier* column also included car reviews and tests, including small local manufacturers. This mirrored the cycling columns we explored earlier with the journalist reporting on his personal experience of a weekend ride, exploring the local area and countryside. A good example is J. T. Ward’s test run of a Robertson cyclecar, made in Sale in 1914:

Another hour and we were threading our way through a maze of motor traffic in Altrincham, and duly arrived back at the home of the Robertson cycle car in Sale. The weather was perfect during the whole of the run... the scenery was picturesque all the way through, and the little car pulled us well; so what more could be wished for to complete a very enjoyable and long-to-be-remembered little spin through rural Cheshire?⁹⁹

⁹⁶ His columns appear in regional newspapers such as the *Preston Herald* and the *Manchester Courier*

⁹⁷ Ward was also a member of Manchester Motor Club

⁹⁸ For example *Manchester Courier* 29/7/1914

⁹⁹ *Manchester Courier* 1/7/1914

The establishment of firms and networks of agencies and repairers, publications and regular journalism took motoring from a spectacle and novelty, as it was in the embryonic period, to a normalised middle-class leisure activity. The young aristocratic motorists of that era still had racing, although some started turning towards aviation as the new “adventure machine”.¹⁰⁰ This is evidenced by examples, such as Charles Rolls, who took to flying as well as motoring, becoming Britain’s first flight fatality in 1910; or Maurice Egerton of Tatton who called himself “aviator” in the 1911 census; or the Macclesfield gentleman, Gerald Higginbotham, a committee member of the MAC and racing driver, who became a pioneering aviator.¹⁰¹ For the local middle-class man however motoring was becoming an affordable adventure as well as becoming part of regular family and social life. For example, Mr John Westworth, vice-captain of St. Helens Motor Club, was also a prominent member of the St. Helens Sketching Club, St. Helens Camera Club and a member of the St. Helens Cycle Club, members of which turned out at his funeral in the town in 1914.¹⁰² Like sketching or photography, motoring was becoming associated with the middle-class suburb with these normal leisure activities becoming entwined. Motor club participation was also part of a growing trend of middle-class sporting consumption, which could be compared to golf, itself almost exclusively middle-class due to the cost of fees and equipment.¹⁰³ In 1925 a member of the Liverpool Motor Club was taken to court for “congregating outside his own parish in concourse with other people on Sunday for the purpose of sport and pastime”. The club had been doing a hill climb on a Sunday and had thus disturbed church services. The defence argued that if prosecution was made, then other middle-class pastimes such as golf, cricket and tennis should also be stopped; there was no prosecution.¹⁰⁴ Motoring entered the suburban environment in an official capacity through its motoring clubs, which thanks to the establishment of regular local motoring journalism make them an excellent source for motoring activities during this period.

¹⁰⁰ Mom, *Atlantic Automobility* p.63

¹⁰¹ Yorke, R. *Flying Success at Freshfield, Formby in 1910*, 7 May 2010. Accessed 18/8/2017 http://www.formbycivicsociety.org.uk/2010_07_flyingsuccessatfreshfield.html

¹⁰² *Liverpool Daily Post* 7/10/1914

¹⁰³ Benson, *The rise of consumer society in Britain, 1880-1980* p.130

¹⁰⁴ *Manchester Guardian* 4/9/1924

The North-West's motoring clubs

National clubs such as the Self-Propelled Traffic Association, the Automobile Club of Great Britain and Ireland and the Auto Cycling Club were prominent in the promotion of motoring, from lobbying national government to providing an environment for social and sporting activities such as trials, tests and clubhouses.¹⁰⁵ A variety of regional clubs formed often affiliated to these national organisations. We have already seen how cycling clubs modified their organisations to include motoring sections. However, there is little evidence that cycling and motorcycling continued to operate in this dual nature for long. What we see broadly in the analysis of regional clubs is the creation of a few early clubs, which catered for an eclectic mix of motorists, mirroring the closeness of automobile interests during the embryonic period. We see this especially in the membership and machines of the Manchester Automobile Club formed in 1899. However, the club environment was adapting to the development of the different motoring subcultures in the UK during the Edwardian period as many local motorcycle clubs were distinct from the more elite early regional automobile clubs.

The first regional motor club in the country was the Liverpool Self-Propelled Traffic Association formed in 1896; this club will be discussed more fully in Chapter 2 because of its close ties to commercial motoring. Social clubs dedicated to motoring gradually followed the LSPTA. The main sources for identifying these clubs are motoring periodicals, yet there is enough evidence to suggest that while promoting the activity of motoring there were also a large number of members involved in the trade, and who used clubs both as a chance to advertise, test and market their products, and to seek financial support from an inevitably well-off membership pool and thus promote local manufacturing. This is evidence of the important interaction with designers and users, a theme that continued through to the interwar period, with the formation of clubs relating to specific marques.¹⁰⁶

Between 1899 and 1902 five regional automobile clubs formed. The first was the Manchester Automobile Club (MAC, 1899), followed by the Manchester Motor Club

¹⁰⁵ Brendon, *The Motoring Century* p.84

¹⁰⁶ Potter, *An Exploration of Social and Cultural Aspects of Motorcycling* p.84

(MMC, 1900), the North-East Lancashire Automobile Club (NELAC, 1902), Liverpool Motor-Cycle Club (LMCC, 1902) and the Burnley Automobile Club (BAC, 1902). These clubs effectively covered the whole of the North-West and soon developed substantial membership numbers. For example, by the end of the 1902 season the LMCC had nearly 40 members,¹⁰⁷ BAC around 40,¹⁰⁸ NELAC 31 members,¹⁰⁹ the MAC over 100,¹¹⁰ and the LSPTA around 100.¹¹¹ Although there are no figures for the number of motorists before registrations were introduced, these numbers must have represented a significant proportion of the North-West's motorists. These clubs held regular runs between April and October every year, with some clubs holding the occasional winter run or lecture series, for example the LMCC captain's paper entitled "The Rise and Progress of the Motor-Bicycle".¹¹² The LSPTA and MAC had club rooms where members could smoke, talk and host lecture series. Like the LSPTA, organisers of the heavy traffic trials and the Liverpool Cycle and Motor Show, there is evidence of these clubs promoting motoring interests. The MAC's committee organised the Manchester exhibition of the 1900 One Thousand Mile Trial.¹¹³ The MAC also provided legal protection for members, the chairman W. E. Rowcliffe often defending motorists in court from prosecution.¹¹⁴

The broad aims of these clubs can be seen in the formation note of the MMC:

Within the last few weeks a Manchester Motor Club has been organised. Its objects are to secure stabling for motors in the centre of Manchester, to arrange for the supply of petrol, and to appoint official repairers in various localities; to arrange periodical club runs, tours, and social meetings at which papers may be read and discussions held on questions of interest to motor owners; to watch the interests of members, and to promote, if it seems desirable, motor races and trials.¹¹⁵

¹⁰⁷ *Motor Car Journal* 7/2/1903 p.936

¹⁰⁸ Figures aren't reported for the BAC, however at a club run in August 1902 there are 56 people pictured *Motorcar Journal* 30/8/1902 p/514 There are no figures for NELAC

¹⁰⁹ *The Autocar* 9/5/1903

¹¹⁰ *Motor Car Journal* 7/7/1902 p.308 Reports over 100 members; at a single run in August 1902 they had 60 attending.

¹¹¹ Figures for MMC are not known

¹¹² *Motor Car Journal* 3/1/1903 p.844

¹¹³ *Manchester Courier* 27/4/1900

¹¹⁴ *Motor Car Journal* 18/10/1903 p.655

¹¹⁵ *Manchester Guardian* 29/1/1900

Interesting to note here is the range of different goals that the club established, which included the establishment of “official” repair and fuel supply. This was crucial, and members of clubs, if they were involved in the trade, began offering fuel at their places of business. For example, Frank Jackson of the MAC and a cycle manufacturer, stocked petrol in Altrincham;¹¹⁶ and Dan Simpson, of the MAC and commercial vehicle manufacturer, provided fuel at his firm’s works in Cornbrook.¹¹⁷

These examples demonstrate the varied activities of the club. However, the MAC, especially, was frequented by motorists who were also involved, or would become involved, in the motor trade. Although a full membership list does not exist from the early period, records of the club runs note several members. A meet at the estate of “Ivyholme” in Macclesfield lists the names of 28 members, of whom 12 were known to be involved in the manufacturing or sale of motor cars.¹¹⁸ Most obvious however is the influence of Marshall and Co., a Manchester-based motor manufacturer. The secretary of the MAC was James Hoyle-Smith, engineer and Managing Director of Marshall and Co. When Marshall’s agencies expanded in 1902 they included Newton and Co. in Manchester.¹¹⁹ John Newton, owner of Newton and Co. was also a member of the MAC. Future directors were early members of the Manchester Automobile Club, including G. Higginbotham¹²⁰, G. P. Dawson¹²¹, former owner J.J. Mann and prominent shareholder D. Q. Henriques. It is possible therefore that Hoyle-Smith found financial backing from his friends at the club, as well as the groups’ business associates.

Figure 7 shows the relatively eclectic nature of motor vehicles which participated in the early clubs, with motorcycles, tricycles and light and large motorcars evident. This also demonstrates how by 1902 the motorcar had yet to become standardised. However, membership of the early clubs was often restrictive in terms of cost. Even the cheapest motor in the early years cost around £100, about 10 times the cost of a bicycle, and thus was a significant cost for the middle-classes whose income typically

¹¹⁶ *The Motor Car Journal* 10/11/1900 p.603

¹¹⁷ *The Autocar* 6/5/1899 p.385

¹¹⁸ *The Motor Car Journal* 2/8/1902 p.447

¹¹⁹ *The Autocar* 1/2/1902; *The Autocar* 8/11/1902

¹²⁰ First reported as club member in *The Autocar* 5/10/1901 p.327

¹²¹ First reported as club member in *The Autocar* 19/7/1902 p.

went from £100 per annum upwards.¹²² Similarly, the subscription cost of the MAC was half a guinea, while the Manchester Wheelers subscription was a tenth less at half a crown. We can understand from this why many cyclists were either saving up, or simply talking about motorcycling during this early period rather than actively doing it. This was to change in the Edwardian period with the wide spread emergence of modest motorists who were able to purchase cheaper, often second-hand motorcycles and club membership fees were much more reasonable, as discussed next.



Figure 7 - A MAC meeting at a member's home in Macclesfield - *Autocar* 2/8/1902

"Modest" Motor Clubs

Supporting the "modest motorists" were the clubs which evolved into an almost two-tiered system. Old motoring clubs like the MAC were affiliated with the ACGB&I. Clubs such as the MAC largely involved expensive cars and gentlemen or trade membership. Its 1907 Reliability run, which became an annual event, was contested exclusively by

¹²² Jackson, *The middle classes 1900-1950* pp.335-336

motorcars, many of which were expensive powerful cars, like the 80-100 horsepower De La Buire owned by the winner J. Higginson Junior. Others were cars entered by local traders, such as the Belsize driven by Managing director J. Hoyle Smith, or the Eagle driven by Ralph Jackson.¹²³

However more modest clubs began to spring up in the Edwardian period, starting with the Manchester Motor Club, which also had a large trade contingent, but largely motorcycling in emphasis. Clubs began to cover smaller communities and most in the North-West were based in suburban areas or tied to towns. There was the Denton Motor Club, the Oldham Motor Club, Stockport Motor Club, the Manchester Clarion Motor Cycle Club, Manchester Hundred Motor Club, Bolton and District Motor Cycling Club, the Bury Motor Club, Rochdale and District Motor Cycle Club, Preston Motor Club, Macclesfield Motor Club, Chester Motor Club, Manx Automobile Club, Blackpool Motor Club, St Helens Motor Club and the Hyde Motor Club, to name only those identified in newspaper and periodical searches. This rise of local clubs mirrors the cycle club boom of the late Victorian period of which there were 49 in the Manchester area.¹²⁴ Many of these clubs formed part of the North-Western Automobile Association (NWAA) which federated the many Lancashire, Cheshire and North-Welsh clubs and hosted inter-club contests,¹²⁵ an example of this was the inter-club team reliability trial which in 1914 was attended by 14 regional motor clubs. Most competitors were on motorcycles or motorcycles and sidecars, as seen in Figure 8. Several of the motorcycles used were locally manufactured. At this event there were for example 8 Bradburys, 6 of which came from the Oldham Motor Club, where Bradbury was based, and 1 DOT motorcycle, based in Manchester.¹²⁶

¹²³ Archer, J., "The Manchester Automobile Club Reliability Run, 1907-14" in *Aspects of Motoring History*, Vol.13 (2017) pp.53.54

¹²⁴ Clayton, "A Missed Opportunity?" p.183

¹²⁵ *Liverpool Daily Post* 16/1/1914

¹²⁶ *Manchester Courier* 1/7/1914

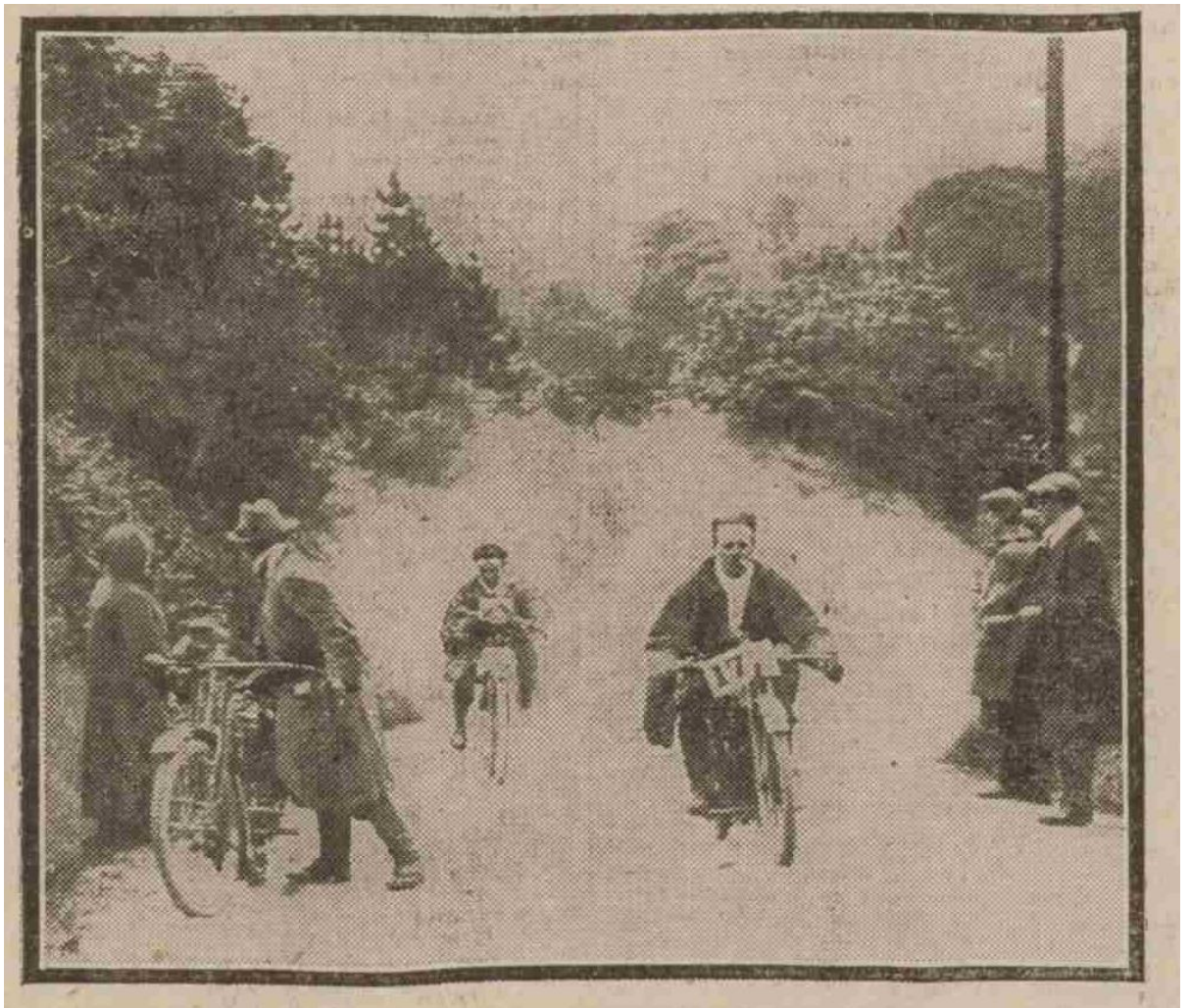


Figure 8 - The Oldham Motor Club team at the NWAA Reliability Trials 1914 - Source *Manchester Courier* 1/7/1914

These clubs catered for a wide range of motorists and vehicles. During competitions there were a considerable number of prize categories for events including motorcycles of one, two and three-cylinder engines, and tricycles.¹²⁷ Emphasis was on the small vehicle, although these clubs still had a minority of car-owning members. The MMC for example had around 300 members in 1908, of which 180 were motorcyclists and 120 car owners, who paid higher subscription fees.¹²⁸

These clubs not only organised reliability runs, social runs, and hill climbs but also more inclusive gymkhanas, involving family fun and games. Gymkhanas had a class connotation, with origins in the upper-class sport of polo and continued well into the

¹²⁷ *Manchester Courier* 21/12/1907 p.7

¹²⁸ *Motor Cycle* 30/12/1908 p.1033

interwar period.¹²⁹ The Manchester Hundred Motor Club gymkhana in June 1914 involved around 200 people, with the journalist noting:

the fair sex was well represented, and their many-coloured costumes blended admirably in the afternoon sunshine.¹³⁰

Events included balloon bursting from sidecars, ring tilting, motorcycle and sidecar musical chairs, as well as non-motoring events such as hat trimming, pea-guessing, balloon racing and bun-biting.¹³¹ Other gymkhana events included a tug of war for motorcyclists versus car owners, a symbolic example of the divide between the two classes of ownership.¹³² A Preston and District Motor Cycle Club gymkhana also featured a breakdown competition,¹³³ presumably so the motorcyclists could show the speed in which they were able to repair a fault in a vehicle, turning “tinkering” into a competition of prowess. For club gymkhanas, members were encouraged to bring their family and friends along for the festivities.¹³⁴

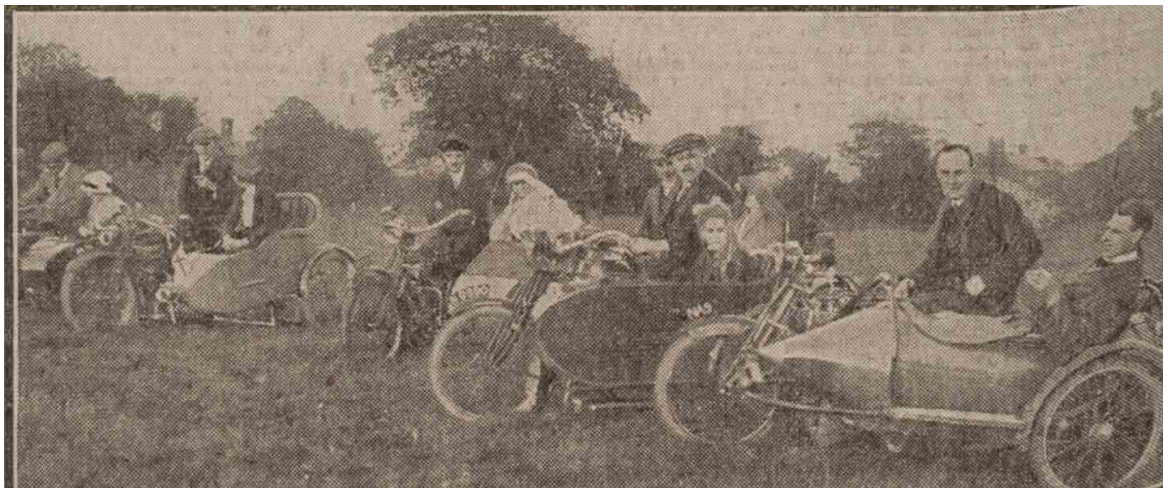


Figure 9 - Ring tilting at the Manchester Hundred Motor Club Gymkhana 1914 -
Source: *Manchester Courier* 17/6/1914

¹²⁹ Potter, *An Exploration of Social and Cultural Aspects of Motorcycling* p.74

¹³⁰ *Manchester Courier* 17/6/1914

¹³¹ *Manchester Courier* 22/7/1914

¹³² *Manchester Courier* 17/6/1914

¹³³ *Preston Herald* 15/7/1914

¹³⁴ *Manchester Courier* 10/9/1913

Motor traders and clubs

Motor traders were often owners and keen motorists who used motoring clubs for dual purposes. This continued during this period and was particularly beneficial for the local motor agents and garages, as the number of clubs expanded to include many of the towns surrounding Manchester. There is much evidence of trade participation, as the following analysis shall show. For example, 21-year-old John Nabb worked in his father's cycle and motor repair business and was brought up in the business.¹³⁵ He was a member of the Bury Motor Club, and died from injuries sustained in a crash on one of the club's hill climbing competitions.¹³⁶

While those involved in the trade obviously enjoyed motoring, there were also particular advantages to being members of clubs and entering vehicles for sale in club competitions. Many local retailers advertised successes in the local press; while success could also be used to impress fellow club members and spectators. The agents Newton and Bennett, members of the MAC and MMC, ran their S.C.A.T. cars in numerous local club events and advertised their local successes in the *Manchester Guardian*, including 3 first places in its class in two MAC events and one MMC.¹³⁷ Figure 10 shows how agents as far afield as Exeter were using an MMC reliability trial result in their advertising.

¹³⁵ *Burnley Express* 5/7/1913

¹³⁶ *Burnley Express* 2/7/1913

¹³⁷ *Manchester Guardian* 4/9/1908



Figure 10 - Success in regional club events were also used further afield – *Western Times* 28/6/1907

However, trade members often created friction, especially if the trade competition entries were extraordinarily successful. Correspondence in the *Motor Cycle* shows how a competitor, who signed his letter as “AN ALSO RAN”, doubted that Rex Co. machines, run by the local agent, and who won the Bolton Motor Club’s hill-climb and an MMC hill-climb on 16 May 1908, were standard models available for purchase.¹³⁸ A similar complaint was made of C. E. Kettle in the *Motor Cycle* in 1907. Kettle was the manager of Triumph’s Manchester depot and a committee member of the MMC. A writer to the *Motor Cycle* complained how two Triumphs were used in an MMC hill climb that had different engine dimensions from those for sale, and these won, although the writer Herbert Brady was a rival motor trader in Manchester.¹³⁹

J.T. Ward summed up the friction between private and trade interests:

Members of a motoring club, too, greatly resent too vast a proportion of the motor trade element in the list of officials, no matter how good sportsmen those trade

¹³⁸ *Motor Cycle* 9/9/1908 p.715

¹³⁹ *Motor Cycle* 6/11/1907 p.890

officials may be. The officials of a motoring club and its committee should at least have a majority of private owner drivers, and all should be practical and enthusiastic motorists.¹⁴⁰

Clearly trade membership was an issue for local clubs.

Trade presence within clubs was combated by restricting competition trade entries or having trade-only categories. For example, in 1905 the MMC had a hill climb for all, and a hill climb for non-trade members, an action taken because of the large number of trade members.¹⁴¹ Similarly in Stockport the Stockport Motor Club's 1905 reliability trial had prizes for the first trade member, H. Hollingdrake of the coachbuilders and motorcar agents in Stockport, and for the first non-trade member.¹⁴²

Motoring clubs and the war

Motoring clubs were interrupted by the outbreak of war in 1914. The Manchester Hundred Motor Club started revolver practices for its members.¹⁴³ Motorists such as S.P. Dawson and H. Pilkington, secretaries of the Manchester Hundred and Stockport Motor Club respectively were enlisted to help the war effort.¹⁴⁴ The Manchester Motor Club urged members to join the Manchester Athletes' Volunteer Force, commanded by H. Reed the vice-president of the MMC, and motorcycle manufacturer.¹⁴⁵ This force also included the MAC and the Manchester Wheelers. Similarly, the Liverpool motor clubs formed a corps with the object of providing training to owners of motor vehicles, with activities such as map reading, ambulance drills and rifle practice.¹⁴⁶

The war took its toll on members. For example, as early as October 1914, sub-captain of the MMC George Ward was captured on the front after signing up as a motor transport driver.¹⁴⁷ J. T. Ward noted in 1915 that:

¹⁴⁰ *Manchester Courier* 13/8/1913

¹⁴¹ *Manchester Courier* 12/4/1905

¹⁴² *Manchester Courier* 17/6/1908

¹⁴³ *Manchester Courier* 16/8/1914

¹⁴⁴ *Manchester Courier* 16/8/1914

¹⁴⁵ *Manchester Courier* 2/12/1914

¹⁴⁶ *Manchester Courier* 2/12/1914

¹⁴⁷ *Manchester Courier* 7/10/1914

So many of our club enthusiasts are at the front... each motoring body in Manchester is seriously depleted, while those who have not joined the colours are too busy to devote time to their favourite pastime.¹⁴⁸

Apart from wartime activities, the number of members and events declined, especially as motoring became viewed as a wartime extravagance. This is demonstrated by a *Punch* cartoon from 1917 entitled “Doing their bit” showing fat motorists driving through a working-class area with an “Eat less bread” slogan attached to the vehicle.¹⁴⁹

Despite the impact of the war it seems as though membership of clubs was in decline before 1914. The membership of the MMC was 300 in 1908. However by 1913 membership had dropped below 200.¹⁵⁰ The turnout at events was poor, so much so that J.T Ward mused:

One wonders whether motoring or automobile clubs are no longer wanted, or have outlived their spheres of usefulness.¹⁵¹

Assessing this decline is difficult, although it is possible that the Edwardian period marked the beginning of family motoring, which has been identified as the “backbone” of interwar automobilism, and with it a more mixed use of the motor vehicle for pleasure, utility and business.¹⁵² Motoring clubs offered motorists a social network that included the family, but were largely dominated by men and serious competition, which is how clubs continued after the war. Membership was also insular, with current members being involved in the appointment of new members:

All are balloted for, and one black ball excludes. As a rule, all members elected must be personally known to three members of the committee. The social and sporting side of the club is its mainstay, and the secret of its success.¹⁵³

While the sporting side might have appealed, it would not suit families who wanted to do their own excursions. Similarly the membership fees might put off some, for example in 1907 annual motorcycle membership of the MMC cost 5s and car

¹⁴⁸ *Manchester Courier* 17/3/1915

¹⁴⁹ *Punch* 26/9/1917

¹⁵⁰ *Manchester Courier* 13/8/1913

¹⁵¹ *Manchester Courier* 13/8/1913

¹⁵² Mom, *Atlantic Automobilism* p.345

¹⁵³ *Motor Cycle* 9/1/1907 p.31

membership 10s.¹⁵⁴ On top of this, motoring had become an established pastime and motoring clubs' role was narrowing, as they did not have to be so active in promoting motoring facilities or signs for roads, especially with the rise of national organisations such as the Automobile Association (AA). This decline is like that of cycling clubs a decade earlier, as family groups and pairs of riders became a much more common sight than a group cycle.¹⁵⁵ We will see in the next section how the family, including children, and the countryside were dominant in marketing campaigns and also in the motoring experiences of several North-West families, who documented their excursions on film.

Aspects of price and class

In 1912 the MAC and the MMC were “referred to respectively as the House of Lords and the House of Commons”; the MAC was made up of car owners, while the MMC was a mix, although motorcyclists were predominant.¹⁵⁶ This reference shows how motorcycle and motorcar ownership was regarded as separated, by both price and the class of the owner. The separation in price between the high-class motorcar and the motorcycle and small car was considerable, and was an issue highlighted during this period by regional journalists and private commentators.

In 1907 the “Motoring” columnist of the *Manchester Guardian* noted:

the many profit-demanding hands through which several makes of cars pass before they finally reach their actual owners

referring in part to how:

the art of the coachbuilder beautifies the car, but his prices are in some cases exorbitant.¹⁵⁷

He then goes on to call for:

a modest motor-car serving the middle-class man to as great an extent as the bicycle does the working-classes.¹⁵⁸

¹⁵⁴ *Motor Cycle* 23/1/1907 p.71

¹⁵⁵ *Manchester Guardian* 11/5/1896 – A *Manchester Guardian* observation showed that members on cycling club runs were 22 percent of cyclists

¹⁵⁶ Archer, “The Manchester Automobile Club Reliability Run, 1907-14” pp.49-50

¹⁵⁷ *Manchester Guardian* 3/5/1907

Furthermore, at the 1907 Manchester Motor Show it was noted that:

The show is indeed for the rich. In a few instances prices are a trifle lower than those of last year, but in others they are higher. And from the point of view of the man of moderate means the vexing part of it all is that most of the large makers are so busy meeting the demand for cars of from 20 to 40 h.p. as to scorn the modest 6 to 10 h.p. car.¹⁵⁹

As well as a price difference, there was also a difference in attitude of the non-motoring public towards the small and large car owner described by a correspondent to the *Manchester Guardian*:

A big book is a big evil, says the Greek proverb, and I have often been reminded of that when watching the attitude of a town crowd "assisting" at the break-down of a big and of a small car respectively. The owner of the latter, very often his own chauffeur and having practical acquaintance with the mechanism of his carriage, is eyed with sympathetic and admiring interest as he is busily setting things to rights, while the proprietor of the bigger concern as he sits and fidgets in his carriage, and his chauffeur and mechanic are fumbling among the machinery, is regarded with a curiosity that is anything but admiring and sympathetic.¹⁶⁰

The attitude of the non-motoring public to different tiers of motoring shows how the non-motorist was more sympathetic towards the modest motorist. This is probably because the motorcycle and light car was culturally and technically linked with the bicycle, rather than the carriage, and as Mom argues, was thus an expression of adventurous practice.¹⁶¹ The bicycle was becoming more universally used, as the 1907 note above expressed: motoring was becoming an object of aspiration. Thus, we see an example of how modest motoring contributed towards an acclimatisation of the non-motoring public.¹⁶² We also see the possible origins of the working-class motorist in the interwar period, as identified by O'Connell, as working in the industry and extremely adept at self-maintenance.¹⁶³

¹⁵⁸ Ibid.

¹⁵⁹ *Manchester Guardian* 6/9/1907 p.6

¹⁶⁰ *Manchester Guardian* 6/9/1907 p.6

¹⁶¹ Mom, *Atlantic Automobility* p.83

¹⁶² Horner, "Modest Motoring" p.70

¹⁶³ O'Connell, *The car in British society* pp.32-37

Motorcyclists were often keen to separate themselves from upper-class motoring extravagance. During the war a “modest motor-cyclist” in 1916 responded to the *Liverpool Daily Post*’s accusation of motoring as an upper-class spending extravagance.

I took a particular account of my expenses last year with my motor-bicycle and side-car, which gave pleasure and outings to myself, my wife, and the two children.... The sum total of my year’s expenses were £5 18s 6d, which covered petrol, oil, tyres, repairs, renewals, and, in fact, every running expense.... We went on our holidays on the outfit and made many week-end excursions into the country... and was my solitary deliberate recreation.¹⁶⁴

We also see the separation in cartoons in *Punch* such as the one in Figure 11 which shows the friction between the chauffeur driven big car and the small owner-driven cyclecar.



Figure 11 - *Punch* cartoon 28/1/1912

¹⁶⁴ *The Liverpool Daily Post and Mercury* 22/2/1916

Extravagant motoring could cost over £1,000 for a vehicle, while an old motorcycle could be picked up second-hand for £10 or less. O'Connell highlights the unexplored second-hand market for cars in the interwar period, demonstrating that it was a significant market which even extended car ownership to the working-classes, particularly those who had in some way been involved in the motor trade.¹⁶⁵ However the price of second-hand vehicles put them well in the range of the middle-class whose income typically went from £100 per annum upwards.¹⁶⁶ In Manchester this second-hand market becomes apparent fairly early on in the classified adverts of newspapers, such as the *Manchester Evening News*, *Manchester Guardian* and *Manchester Courier* and in trade periodicals such as *The Autocar* or *The Motor Cycle*. Both businesses and individuals began advertising second-hand. For example, the Road Carrying Company ran the following in the *Manchester Guardian* in 1906: "Several Second-hand 2, 3, and 4 Cylinder CARS FOR SALE, at exceptionally low prices."¹⁶⁷ Businesses with large depreciating stocks used the auction option to sell many of their surplus second-hand stock. For example, Cockshoot used auctioneers to sell "100 second-hand carriages, several motor-cars" in a 1906 auction.¹⁶⁸ Other outlets were the auction by the Manchester Motor Garage auctioning cars, vans and accessories, probably in an attempt to get rid of old stock,¹⁶⁹ and similarly a garage in Southport's auction included six assorted motor vehicles.¹⁷⁰ There are many other examples of this during this period, including William Lea of Liverpool's auction of 1908 which sought to attract attendance by having no reserves on the motor stock.¹⁷¹ Private adverts appeared, for example, T. W. Grace of Didsbury advertised his old 3 cylinder Belsize because he had ordered a larger car.¹⁷² Quite a lot of these included prices, for example a one year old 3.5 horsepower motorcycle for sale in 1909 for £40.¹⁷³

Model changes, quick improvements in technology and the social pressure involved in owning the "new" model, allowed for more modest motorists to pick up only slightly

¹⁶⁵ O'Connell, *The car in British society* pp.32-37

¹⁶⁶ Jackson, *The middle classes 1900-1950* pp.335-336

¹⁶⁷ *Manchester Guardian* 29/3/1906

¹⁶⁸ *Manchester Guardian* 3/7/1906

¹⁶⁹ *Manchester Guardian* 30/7/1908

¹⁷⁰ *Manchester Guardian* 5/12/1908

¹⁷¹ *Manchester Guardian* 5/12/1908

¹⁷² *Manchester Guardian* 3/7/1906

¹⁷³ *Manchester Guardian* 30/7/1909

outdated models very cheap second-hand. In the 1913 *Motor Cycle* there are several second-hand vehicles advertised; the older the vehicle, the cheaper it was. For example, a 1906 to 1908 motorcycle could be picked up for between £10 and 15, while a second-hand motorcycle that was only one year old would cost between £40 and £60.¹⁷⁴

The ability to pick up a bargain had always been possible and was not confined to the interwar period, or indeed the Edwardian period. Worthington-Williams noted: “There have always been small and relatively cheap cars in either the tricar or voiturette class, and historians have somewhat misled the public into thinking that motoring in the early days was only the prerogative of the rich.”¹⁷⁵ The adoption of certain technologies during this period can be attributed to increased sociability and comfort. Worthington-Williams highlights the developing technology of the early tricars and forecars, with the passenger at the front of the vehicle, being replaced from 1903 by the motorcycle and sidecar which, with the passenger beside the vehicle, allowed them to converse better,¹⁷⁶ a good example of use dictating design. In the Netherlands technical questions sent to motoring journals were largely around creating a connection to sidecars, so couples could go out together.¹⁷⁷

¹⁷⁴ *Motor Cycle* Advertisements supplement 3/7/1913 p.70

¹⁷⁵ Worthington-Williams, “From ‘new motoring’ to the microcar” in *Aspects of Motoring History*, Vol.13 (2017) p.5

¹⁷⁶ Worthington Williams, “From ‘new motoring’ to the microcar” p.6

¹⁷⁷ Mom (2015) p.83



Figure 12 - *Motor Cycle* – 7/7/1910 p.655 – Shows the social and family aspect of motorcycling.

As analysis of the suburban clubs has shown, social activities both with friends and family, women and children were an important part of the motoring experience. The quote used earlier from a 1916 motorcyclist emphasises that the motorcycle and sidecar:

gave pleasure and outings to myself, my wife, and the two children...We went on our holidays on the outfit and made many week-end excursions into the country.¹⁷⁸

The family aspect is also seen in Figure 12 which shows two families on a motorcycle outing on the Manchester-Chester road in 1910. The sidecars and even the space in front of one of the riders is used to carry wives and children, while sidecars used in club competitions might be manned by the owner's friend. With the emphasis on family, or a romantic trip, and other social aspects of motoring, came the aspiration for the comforts of the motorcar. However even Ford could not quite bridge the price gap between the motorcycle and the car, despite advertising as such in 1914 shown in Figure 13.

¹⁷⁸ *The Liverpool Daily Post and Mercury* 22/2/1916



Figure 13 - Ford advert – *Manchester Guardian* 3/4/1914

Racing and spectating

While the North-West Federation and individual clubs organised hill climbs and reliability runs, perhaps the most famous race in the North-West that still endures to this day is the Isle of Man TT race. As a national and international competition, the region's motor and motorcycle clubs fielded members. In 1909 the Manchester Motor Club sent four members including Harry Reed, the designer of the DOT motorcycle, and the holder of the Twin Cycle Trophy from 1908.¹⁷⁹ As well as providing regular competition for keen motorists, big races were often attended by big crowds. We have seen earlier in the chapter how racing was at first added to local cycle racing events, which was enjoyed locally by thousands of spectators. However, during the first

¹⁷⁹ *Manchester Courier* 11/8/1909

decade of the 20th century motor racing became a significant spectator sport. By 1914 a one-day excursion to the T.T. was offered by the *North Cheshire Herald*, including transport from Manchester and back for 9s 9d.¹⁸⁰ The T.T. became part of the holiday experience and was used to attract holiday makers to the area.

Apart from the Isle of Man, the other popular spectator competition was Southport which hosted several speed trials from 1903 through to the interwar period. Figure 14 shows the size of the crowd by the side of the course, enjoying the closeness and the speed in demonstration. Like the earlier Thousand Mile Trial the event had the impact of education:

The trials have done much to educate the public as to the tremendous power, yet simplicity and controllability, of motor cars, and the effect will, no doubt, be beneficial to the trade generally in the North of England, for visitors were attracted from all the northern counties.¹⁸¹

During the interwar years the spectators at SouthportQ regularly numbered over 5,000.¹⁸²



Figure 14 - The Southport Speed Trials, including a view of the large crowd - *Autocar* 10/10/1903

¹⁸⁰ *Manchester Guardian* 17/5/1914

¹⁸¹ *Manchester Courier* 7/9/1903

¹⁸² *Lancashire Evening Post* 3/4/1933

Conclusion

A study of local automobile diffusion in the Edwardian period has shown that ownership did not necessarily slowly slide down the social scale from upper to middle-class ownership. The second hand market and the popularity of motorcycling during the Edwardian period meant that the differences in price, and the running costs of vehicles varied massively. While a Rolls-Royce, with custom coachwork and a chauffeur and mechanic might represent a significant portion of early motorists, so was the under £50 motorcycle with sidecar, driven by a more modest motorist. Therefore we can identify two distinct classes of owners. This is also reflected in the rise of local suburban motoring clubs which offered an environment for these different groups of motorists. We also see how motorcycle and motorcar owners were separated socially with different membership prices, different public perceptions, different racing categories and featuring different teams at club gymkhanas.

Motoring began to fit with other defining activities of Edwardian middle-class life such as photography, art and military drills during the war. These clubs were numerous and had a significant membership number. Our understanding of the defining features of middle-class suburban life is perhaps best represented visually in the 1912 cartoon in Figure 15, where children are playing at motoring, cycling, cricket and picnics in combined chaos in a Northern suburb. The rise of clubs was also linked with the increasing numbers of agents and motor garages that catered for the growing market of motoring. And the motor car was also having a wider impact on the non-motoring public as diffusion increased. This included the influence of the motor car in the democratic process and the increasing popularity of motoring as a spectator sport.



RETRIBUTION.

MR. A., WHO CLAIMS TO HAVE DONE MORE FOR THE CYCLE AND MOTOR-CAR INDUSTRY THAN ANY MAN, HAS BEEN ORDERED WALKING EXERCISE BY HIS DOCTOR. THIS IS HIS FIRST SATURDAY AFTERNOON IN A NORTHERN SUBURB.

Figure 15 - *Punch* 17/7/1912

1.4 - The car, popular culture and middle-class consumption

Economic and business historians note three general stages of motor car diffusion: the upper-classes in the pre-first world war period; the middle-classes in the interwar period; and the final stage towards “mass motoring” after the Second World War.¹⁸³ The growth of the middle-classes and middle-class income during the interwar period supported the significant increase in motor manufacturing and consumption during this period. Average annual income of the middle-classes rose from £340 in 1913 to £445 in 1928 and car ownership increased steadily from just over 100,000 in 1918 to over two million by 1939, while motor car prices dropped from the middle of the 1920s.¹⁸⁴ For example the Austin Seven price fell from £259 in 1924 to £130 in 1936.¹⁸⁵ Ownership of motor vehicles became a mark of middle-class prosperity and analysis of spending shows that after housing and clothing, motoring was the next biggest expense for a middle-class family.¹⁸⁶ Cost, marketing, design and production line techniques have been central aspects to the analysis of manufacturing success and the demand for motorcars during this period as scholars seek to explain its diffusion. For example, the success of Morris, Austin and Ford is often attributed to their ability to produce and sell cars cheaper and on a larger scale than other manufacturers.¹⁸⁷ While clearly these aspects were important in explaining the diffusion of the motor car, analysis has been enriched by an ever increasing variety of factors identified among social historians, looking more closely at who was purchasing cars, why they were doing so and how they were using them.

It has been seen that the standout analysis of the diffusion of motoring, and its historiography, has been made recently by Mom. Mom argues strongly against what he defines as the “toy-to-tool” thesis: that the interwar era was a period when the “toy” of the pre-war period naturally evolved into a consumer “tool”, which is

¹⁸³ Bowden, S. and Turner, P., “The Demand for Consumer Durables in the United Kingdom in the Interwar Period” in *The Journal of Economic History*, Vol.53:2 (1993) p.244; Miller and Church, “Motor Manufacturing” pp.188-190

¹⁸⁴ Jackson, *The middle classes 1900-1950* pp.24-26; O’Connell, *Atlantic Automobilmism* p.19

¹⁸⁵ O’Connell, S., “Motoring and Modernity”, in Carnivale, F. and Strange, J-M. eds. *20TH Century Britain: Economic, cultural and social change* (Harlow: Pearson, 2007) p.113

¹⁸⁶ Jackson, *The middle classes 1900-1950* p.26; O’Connell, “Motoring and Modernity” pp.112-113

¹⁸⁷ Foreman-Peck, Bowden and McKinley, *The British Motor Industry* pp.50-52

prevalent in many narrative histories for this period.¹⁸⁸ Instead, Mom argues that utility was emphasised as part of the culture of motoring; used as an alibi for pleasure motoring and used as a marketing tool by car supporters, which we see especially amongst motoring lobbyists for the removal of the “luxury” horsepower tax.¹⁸⁹ We certainly see arguments of utility used as a common theme in the campaign throughout the period to reduce or change the horse-power tax.¹⁹⁰ As Plowden highlights, however, this theme was sometimes contradicted by its proponents. For example, Stenson Cooke, the Secretary of the Automobile Association, argued in 1924 against a government report that private cars were mainly used for pleasure, while arguing in 1920 that most motorists only used their vehicles one or two times a week which, as Plowden comments, rather damages the claim made that the car was not just a weekend toy.¹⁹¹ This debate about how vehicles were used during this period is an important one, as it affects how we understand the substantial diffusion of the car.

O’Connell’s analysis of car culture and the growing diffusion of the car in the UK draws attention to the car as a powerful symbol, both of leisure and of class. For example “The car offered owners the chance to express their status and their distinction from less wealthy groups”, and offered the middle-classes an opportunity to escape the “collective gaze” and being identified with the working-class seaside holiday, an aspect of important cultural distinction identified by John Urry.¹⁹² The car also offered users the geographical freedom to access exclusive destinations such as roadside inns, golf clubs and country parks.¹⁹³ Several historians have noted the ability of the automobile to act as a cocoon, protecting its occupants both literally and figuratively from the outside world.¹⁹⁴ As we shall see in the following analysis the romantic, the escape and the rural were especially emphasised in various marketing campaigns and in the cine film recordings of the North-West’s motorists in the 1920s and 1930s.

This section will set the decline of Manchester as a motor manufacturing centre against the increasing diffusion of the motor car and the increasing variety of use and

¹⁸⁸ Mom, *Atlantic Automobilmism* p.4

¹⁸⁹ Mom, *Atlantic Automobilmism* p.639

¹⁹⁰ Plowden, *The motor car and politics* pp.158-162

¹⁹¹ Stenson Cooke in Plowden, *The motor car and politics* p.161; p.173

¹⁹² O’Connell, *The car in British society* pp.78-79; Urry, J., *The Tourist Gaze* (London, Sage, 1990) p.66

¹⁹³ O’Connell, *The car in British society* p.93; Law, *The Experience of Suburban Modernity* pp.119-141

¹⁹⁴ Mom, *Atlantic Automobilmism* pp.374-386; Pooley, Turnbull, Adams, *A Mobile Century?* p.15

users. The aim is to explore the aspects of car culture that are more intangible than price or technological developments. We will explore the reputation of cars and the nuances of popular associations, which was particularly noticeable for the Manchester-built Model T Ford as it rose to ubiquity. It became entrenched in popular stereotypes such as “cheap” or “American”. There will then be a brief review of the marketing and advertising of a few different Manchester manufacturers, which will be used to examine how manufacturers attempted to appeal to users and what the ideal user was supposed to be doing. It has been found that both the countryside and exclusive social environments were used frequently which adds more legitimacy to O’Connell’s argument that the car’s diffusion can only be explained if we consider it as a status symbol, and to Jeremiah’s argument that the countryside was a central factor in the sale of motorcars during this period.¹⁹⁵ Finally this section will end with a brief exploration of sources from local users, including the emergence of the automobile and automobile touring in the North-West’s homemade cine films housed at the North-West Film Archive, and small personal reminiscences on travel by car. It is recognised that these sources only capture a very small part of motoring. For example, holidays to the seaside might only be undertaken a few times a year, whilst the car might be used for a range of uses, more mundane, that we are unaware of. Therefore, a brief exploration of the use of the car during this period and comparisons to other studies will be important to begin with.

Utility or pleasure?

While today commuting to work by car is one of the dominant forms of automobile use, in the first half of the twentieth century it was fairly rare, although research shows an increase in car commuting towards the end of the period.¹⁹⁶ Although their sample size was small, a study by Pooley, Turnbull and Adams showed that in the 1920s only 5.2 percent of commuting journeys were made by car and 3.9 percent by motorcycle. This had increased overall by 2.3 percent by the 1930s with 9.1 percent by car and 2.3 percent by motorcycle, despite car ownership per household being over 20 percent by 1938. Pooley, Turnbull and Adams also noted that this was less in cities where public

¹⁹⁵ Jeremiah, *Representations of British motoring* p.233

¹⁹⁶ Law, *The Experience of Suburban Modernity* pp.198-200

transport was better. After interviewing participants, they concluded that car owners largely chose to use their cars for pleasure. For example, one Manchester respondent remarked, "It would not have occurred to you to use it for work".¹⁹⁷ Ironically, even Ford sales representatives in Manchester could not get a company car and they walked door to door, without being able to show customers their product. This changed in the 1920s at regional dealers Quicks, when a sales representative took it upon himself to purchase a Ford for his rounds.¹⁹⁸ Despite this, commuting was an aspect of motoring that was recognised by manufacturers from the beginning, with the sale of cars to doctors being popular. For example, an article in *The Autocar* in 1900 featured a special doctors' Landau build by Manchester firm Marshall and Co.¹⁹⁹ Commuting was part of the commercial opportunities for motoring which will be covered in more detail in the next chapter. However, in the 1930s urban car use was becoming an issue. In Manchester motorists complained of the lack of cheap parking facilities and the council began to consider municipal car parks, although a survey of private garage facilities showed that only 1,248 cars were garaged during weekdays in the city centre.²⁰⁰

Benson argues that the growth of motor vehicle ownership was central to the rise of independent family tourism; in 1981 70 percent of tourists used a car for their holiday travel, a phenomenon that can trace its roots to the pre-Second World War period.²⁰¹ This independent travel was important in the North-West and elsewhere in the UK, and it separated the car user from the non-car user, who was limited to train, or omnibus travel to popular locations. Observations of tourism in Lancashire by John Walton for example show how from the late 19th century whole towns or factories would holiday together in the same place.²⁰² We shall see this separation both in marketing approaches during the interwar period and in the evidence from home recordings of a few of the North-West motor users. Despite this Benson also notes the continuity that some car owners experienced, going to the same locations that they

¹⁹⁷ Pooley, Turnbull and Adams, *A Mobile Century?* pp.116-129; Bowden and Turner, "The Demand for Consumer Durables" p.245

¹⁹⁸ Brooks, *Quicks: the first 75 years* pp.17-18

¹⁹⁹ *The Autocar* 29/9/1900

²⁰⁰ Special Committee Minute Book Vol.12 – Meeting of the TCSC 31/1/1930

²⁰¹ Benson, *The rise of consumer society in Britain, 1880-1980* pp.88-89

²⁰² Walton, J. K., *Blackpool Landlady* (Manchester: Manchester University Press, 1978) pp.39-40

had before they owned a car.²⁰³ This is evident in holiday traffic censuses looking at travel in North Wales, Llandudno being a traditional holiday spot for families in the North-West:

For the rest, the holiday weekend was chiefly remarkable on the coast of North Wales for the number of visiting motorcars, which came in steady streams along all the main roads. At Llandudno cars were parked without a break across the whole length of the bay, from the Little Orme to the pierhead, while according to an official traffic census taken at Pwllheli 10,400 private cars have reached the town in the last three days, in addition to 1,200 motor-buses and bicycles.²⁰⁴

Automobile scholars note certain trends during the interwar period, one of which is the steady growth of commercial motor vehicle sales, especially towards the later end of the 1920s onwards with an average annual growth rate of 10 percent between 1924-1938, which was greater than the average annual growth of private motors.²⁰⁵ However this could be slightly misleading, as smaller commercial vehicles sold to individuals could often have multipurpose uses. For example, the Model T was sold in the 1920s with detachable bodywork to facilitate a multi-purpose vehicle. Brooks pointed out how, “during the week a van or pick-up type body was bolted on; this being removed at weekends and an open tourer body substituted.”²⁰⁶ Businesses also offered convertible bodies for the Ford van, such as “Magnet Convertible Bodies” in Figure 16 where a van owner can take his family on “a glorious weekend in the country”. Such convertible bodies were widespread, with several companies offering “pleasure body and delivery van” combinations.²⁰⁷ Willys-Overland-Crossley also marketed the Whippet “Commerce saloon” in a similar way, an advert stating “Killing two birds with one stone. From pleasure car to business vehicle in 55 secs.” The car was marketed to small businessmen such as butchers, dairymen, farmers and commercial travellers with the back seats being removable for both the working week and the weekend tour.²⁰⁸ Similarly inventors, such as motor engineer William Ridings,

²⁰³ Benson, *The rise of consumer society in Britain, 1880-1980* p.91

²⁰⁴ *Manchester Guardian* 7/8/1933

²⁰⁵ Miller and Church, “Motor Manufacturing” p.181

²⁰⁶ Brooks, *Quicks: the first 75 years* p.17

²⁰⁷ Barker, C., Tuckett, N. and Lilleker, D., *The English Model T Ford Volume 2 – Beyond the Factory* (Keighley: Model T Ford Register of Great Britain, 2014) pp.41-43

²⁰⁸ *The Motor* 27/8/1928

of Urmston were looking to patent convertible caravans. Dubbed the “Garavan” in *The Autocar*, the caravan was designed as a workshop and garage, easily convertible into a holiday caravan for the family.²⁰⁹ O’Connell’s analysis of rural ownership also highlights the potential ambiguity of vehicle usage with the ideal farmer’s car “capable of absorbing the punishment entailed in taking a load to market, possibly with the assistance of a trailer, and of taking the family on their annual holiday.”²¹⁰

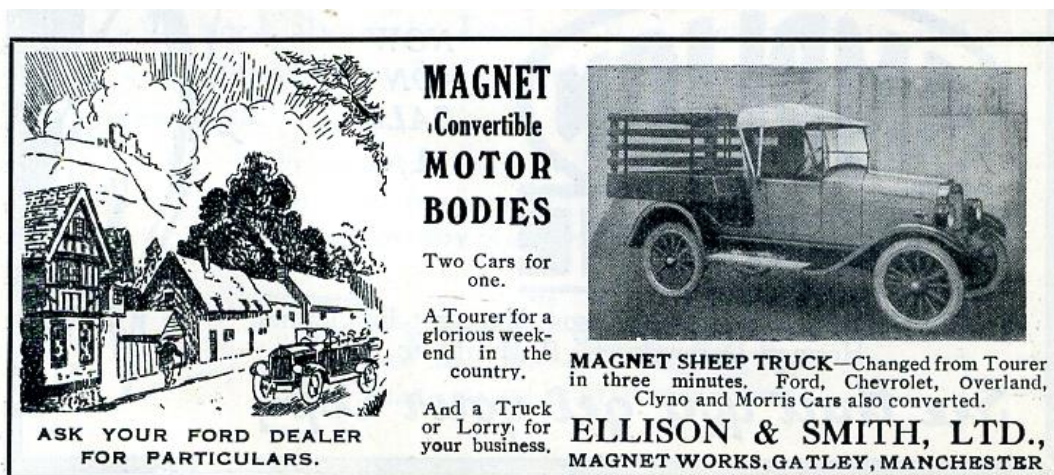


Figure 16 – Convertible body adverts appeared throughout the 1920s including this example in *The Ford Times* August 1926 p.684

Analysis shows that there were minimal changes in commuting habits during this period, suggesting that there was no firm shift in the car from a “toy” to a “tool”, best demonstrated when we look at the number of cars in Manchester on a weekday: 1,248 in 1930 compared to over 10,000 motor vehicles at Llandudno during a bank holiday weekend in 1933.²¹¹ Nor is it always easy to separate private and commercial vehicles. There are too many multifaceted uses and complexities of ownership. Indeed, as Mom has highlighted the interwar period was one of “multiple-use automobilism... consisted for a quarter in pure pleasure, another quarter in pure business, while the remaining was an inextricable mix of pleasure, utility and business use.”²¹²

²⁰⁹ Science and Industry Museum – Ridings collection – YA.2013.20 patents for device; *Autocar* 4/1/1929

²¹⁰ O’Connell, *The car in British society* p.171

²¹¹ *Manchester Guardian* 7/8/1933

²¹² Mom, *Atlantic Automobilism* p.345

Reputation and popular culture

Aspray identified over fifty information issues considered when a car was bought, highlighting the complexity of the decision-making process. These include technology, features and aspects of makes and models, issues with dealers and manufacturers, financial considerations, a general understanding of cars and a range of subjective measures including manufacturers' bias and reputation.²¹³ As manufacturers looked to appeal to increasingly growing markets, popular opinion could become an important factor in the decision-making process. For example, O'Connell highlighted the relatively poor sales of the highly popularised £100 car, the Morris Minor, released in 1931, arguing that nobody wanted the cheapest car.²¹⁴ This exposes the impressionable nature of the automobile purchase, contradictory of the emphasis put on price, used to explain the success of Ford from 1911 and Morris from 1921.²¹⁵ But despite the relative cheapness and quality of the Model T, its share in the UK industry fell dramatically from 22 percent in 1921 to 2 percent in 1925. Automobile historians argue that this was largely due to the horsepower tax and relatively high petrol prices, which were unfavourable for Model T owners, alongside the problems of a car designed for the American market and the slashing in price of Morris cars to compete.²¹⁶ The gap in price between the Morris Cowley and the Model T closed significantly. In 1921 there was a price difference of about £200, but by 1924 the difference was around £100. While Morris sales rocketed, Ford had to make do with increased commercial vehicle orders, to offset rapidly declining private car sales.²¹⁷ This was perhaps due to the more favourable taxation on Ford commercial vehicles.²¹⁸ However Morris and Ford had been competing for years, going back to the Oxford's introduction in 1913. How then can we explain the popularity of the Model T as a commercial vehicle and its undesirability as a private motor car? While price competition and running costs are undoubtedly important, a broader look at cultural

²¹³ Aspray, "One Hundred Years of Car Buying" pp.11-13

²¹⁴ O'Connell, *The car in British society* pp.22-24

²¹⁵ Bowden and Turner, "The Demand for Consumer Durables" p.252

²¹⁶ Foreman-Peck, Bowden and McKinley, *The British Motor Industry* p.68; Church, *The Manchester Motor Industry 1900-1938* p.37; Georgano, Baldwin, Clausager and Wood, *Britain's Motor Industry the First Hundred Years* p.66

²¹⁷ Riley, Lilleker and Tuckett, *The English Model T Ford* p.121

²¹⁸ Riley, Lilleker and Tuckett, *The English Model T Ford* pp.196-198

aspects of consumption can help us understand sales performance in these turbulent years.

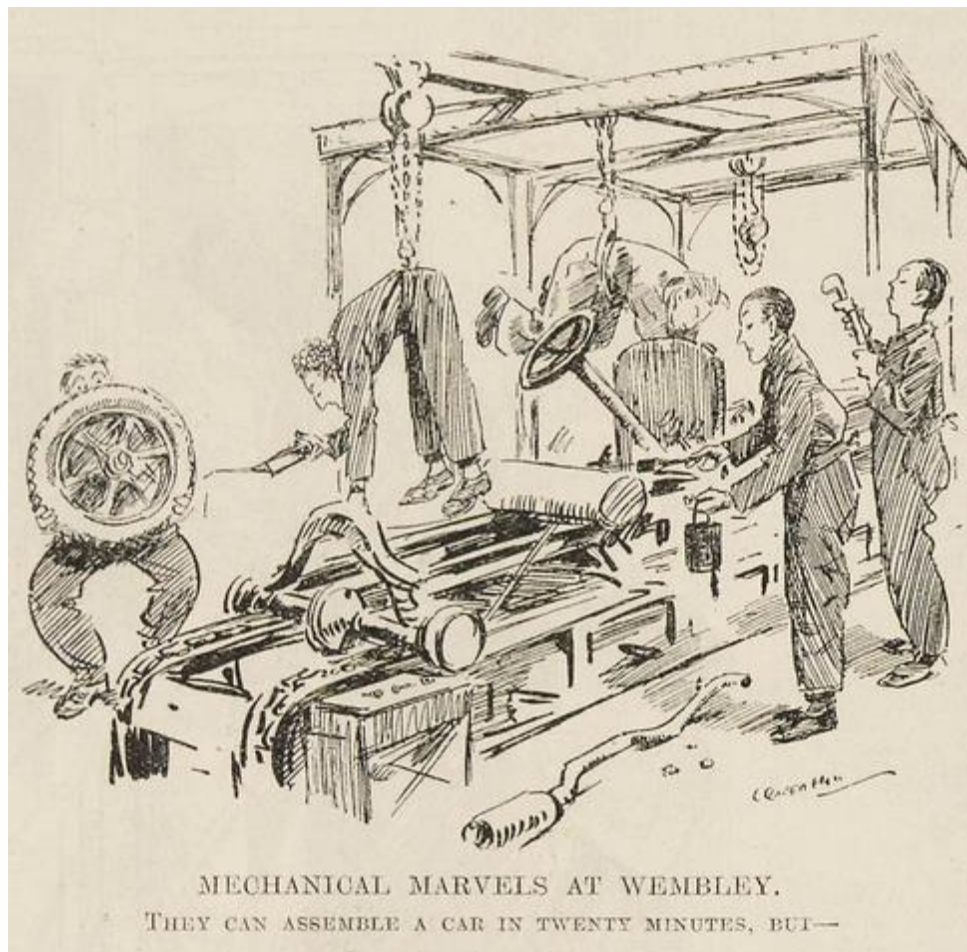


Figure 17 - Satirical cartoon featuring the Ford production line at the Wembley exhibition *Punch* 24/6/1924 p.678

Ford's reputation as "cheap" became widespread in the interwar period. They were the butt of numerous jokes in society magazines such as *Punch*. There are numerous examples including:

It is said that the Ford motor works are now turning out a car every six and a-half seconds. We suppose it is the painting that accounts for most of this time.²¹⁹

and

Tramps in America do have Ford cars.²²⁰

²¹⁹ *Punch* 3/8/1921 p.81

²²⁰ *Punch* 26/10/1926 p.458

Included in these two jokes is the idea of a lower-class of motorist, and the association of cheapness with quick production line technology, as seen in the first joke and the satirical cartoon in Figure 17. Indeed, so popular were these references that a writer in *The Bystander* commented:

If a music-hall comedian is short of a laugh, he has only to mention the magic word [Ford] and a gust of merriment sweeps through the theatre.²²¹

The archetypal luxury car was the Rolls-Royce, while Ford was at the opposite end of the motoring social scale. Indeed, the comparison of both was used frequently as a cultural reference during this period. For example:

To-day our girls have Rolls Royce dresses and Ford manners.²²²

Or this advert:

Pianos. Rolls Royce quality at Ford prices.²²³

As cars and makes became more popular, they became cultural references. This must have had an increased impact on social opinions during the interwar period as the sight of cars on the country's roads became increasingly common.

Part of this popular perception can be traced to early attitudes towards American automobiles. The reputation of Ford was affected by the intensity of patriotic campaigning by British manufacturers. Jeremiah highlights a 1924 Morris campaign that attacked its foreign rivals "If for Any Reason You Do Not Buy a Morris – At Any Rate Buy a British Car".²²⁴ This led Ford to reply with the marketing campaigns of 1924 to 1926 that emphasised its British manufacture and drew attention to the preconceptions of the public, as we will see later. The impact of patriotic consumerism is hard to judge but several automobile historians highlight it as an important aspect of the period. For example, Jeremiah argued that

²²¹ *The Bystander* 22/3/1922 p.657

²²² *Dundee Evening Telegraph* 29/2/1928 p.6

²²³ *Belfast-News Letter* 14/6/1923 p.6

²²⁴ Jeremiah, *Representations of British motoring* p.153; For example, the *Belfast News-Letter* 5/1/1924 p.11

such was the intensity of the patriotic culture that contemporary advertisements implied that the ownership of a foreign car would cause social embarrassment.²²⁵

This conclusion certainly tallies with the popular use of Ford in 1920s jokes. It is also an aspect of automobile culture that has endured to this day. However, prejudice against the American car was not new, and was a product of early imports into the UK from around the early 1900s when there were still relatively few British manufacturers.²²⁶ This prejudice often manifested itself in national traits being transferred to the cars produced in different countries; this was particularly pronounced when it came to American and European attitudes towards both motoring and motorcar design.²²⁷ *The Autocar* in 1922 highlighted these national traits,

Great Britain with its intense practicality; America with its mind fastened on cheap stampings.

In this analysis also were French, Italian and German stereotypes.²²⁸ One aspect of this national association was the difference between the British emphasis on comfort and quietness, against the American focus on convenience and features such as the high ride height more suitable for American driving conditions.

This national prejudice affected different types of vehicles in different ways and might go some way to explaining the difference in the performance of Ford's commercial and private Model T during the 1920s.²²⁹ A high ride height was probably much more valued than comfort and quietness in a one-ton truck. Ford sought to tackle this with a marketing campaign in the 1920s which coincided with them changing to producing, rather than importing, vehicle components. In 1923 they advertised the Ford as right-hand drive and with lower seating, adaptations made for the British market.²³⁰ In 1924 they advertised the Model T as "British":

²²⁵ Jeremiah, *Representations of British motoring* p.157

²²⁶ Foreman-Peck, Bowden And McKinley, *The British Motor Industry* p.24

²²⁷ Mom, *Atlantic Automobilmism* pp.376-377

²²⁸ *The Autocar* 27/10/1922 p.822

²²⁹ While passenger car sales plummeted, commercial vehicle sales were steady throughout the 1920s: Riley, Lilleker and Tuckett, *The English Model T Ford* p.197

²³⁰ *Fording, Vol. 5 No.1 1/1/1923* from Riley, Lilleaker and Tuckett, *The English Model T Ford* p.142

made by British labour from British materials in the Ford Works, Trafford Park, Manchester, for the British market with lowered chassis, deeper cushioning, English body in “Empire Grey” and a choice of other colours.²³¹

Meanwhile Quicks, Ford’s main dealership in Manchester, were finding success selling fleets of Model Ts to businesses such as United Cattle Products, bakeries and other small businesses, to whom social standing or a perceived uncomfortable ride was not an issue.²³²



Figure 18 - Image of Ford display at the British Industries Fair in Birmingham 1926 - *The Ford Times* April 1926 p.315

Patriotic consumerism goes beyond the automobile. For example during the 1930s there was a “why buy foreign butter?” campaign and Cadbury’s announced it only used milk from British farms.²³³ This widespread aspect of interwar consumerism, Benson argued, increased consumers’ consciousness of their national identity and contributed towards the results of a 1939 survey which showed that 46 percent of

²³¹ *Ford Times* Dec 1924 p.54

²³² Brooks, *Quicks: the first 75 years* p.19

²³³ Benson, *The rise of consumer society in Britain, 1880-1980* p.146

consumers attempted to discover the origin of their purchases.²³⁴ Linked with the “buy-British” marketing was the popular use of the British countryside in 1920s car and motoring marketing. Both O’Connell and Jeremiah highlight the “See Britain First” campaign launched by Shell in 1925, which featured the motorcar in several identifiable and famous British locations like Ullswater or Durham Cathedral.²³⁵ The American car then was the invader.

While national identity was a factor for the consumer when buying a car, there is little evidence that regional identification had much impact, although a few Manchester based manufacturers did look to harness the city’s industrial reputation. For example, one of Willys Overland Crossley’s most successful models was its “Manchester” commercial vehicle range built from 1928-1932. Ties to the city were emphasised in advertising: “You can *always* rely upon Manchester power to get you anywhere” and the appeal of “Money-making Manchester”.²³⁶ Crossley also used the title “Mancunian” for a bus model in the 1930s, although this might have been because it was built to meet the specifications of the Manchester Corporation.²³⁷ The identification with the local was not unique to Willys Overland Crossley or Crossley Motors. Another American firm, Vauxhall, owned by General Motors, produced the “Bedford” truck, their production base being in Luton, Bedfordshire. The “Bedford” was a name that continued to be used for several decades. It seems however, that the local name was used by manufacturers of American reputation as an attempt to anglicise their product, rather than necessarily promoting any regional sense of identity, in what were models that both firms were trying to sell to a national market. Anglicising their product was to be a continued theme for Ford in the period. In the 1930s for example they produced the Ford Tudor, identifying themselves with historical British themes that were popular during the period.²³⁸ By using national or local names they were setting themselves in the British psyche, not as invaders, but as natives.

²³⁴ Benson, *The rise of consumer society in Britain, 1880-1980* p.146

²³⁵ Jeremiah, *Representations of British motoring* p.80; O’Connell, *The car in British society* p.156

²³⁶ *Commercial Motor* 11/3/1903

²³⁷ Eyre, Heaps and Townsin, *Crossley* pp.154-168

²³⁸ O’Connell, “Motoring and Modernity” p.113

The irrationality and impulsiveness of car buying and ownership is an aspect of scholarship that has remained unexamined. Mom highlighted how people bought cars when they could not afford them, then could not sell them because of a sense of pride, demonstrated by how “depression-proof” car ownership was during the 1930s depression.²³⁹ While in Manchester, Ford sales representatives emphasised the impression that a car could make:

[The salesman Wayne] Antrobus was able to persuade a good many to buy vans by pointing out that people respected success and that the more money you had the more friends you had. On the grounds that this made sound business sense even if there was only the appurtenance of affluence, he managed to sell a small truck to one Salford merchant who at that time was hard pressed to keep his family in food and clothes.²⁴⁰

By exploring the increasing use of motoring and the motorcar in popular culture we can to some extent gauge the impact of aspects of social pressure and popular references. We have seen the popularity of Ford jokes and the association of Fords as cheap and therefore low quality. We have also highlighted the increasing emphasis in consumer culture on the origins of products, which certainly included the automobile, both in its use and its purchase. This would have had an impact both on Ford, and on Willys Overland Crossley, both of whom imported many components from America in the early 1920s before changing to native supply or in-house manufacturing, whether through consumer pressure or through the McKenna duties, or a combination of both.

Marketing and advertising

Examining marketing material during and after the war shows the wide variety in marketing strategies from 1914 to the late 1920s, varying by manufacturer and by the advertising publications. For this study, we will look at a few different types of manufacturers’ material, from Ford at the lower end of the market, and then Belsize and Crossley selling models that were more expensive. By doing this we can see if Ford or Belsize, marketing their cars to the middle-classes were more utilitarian in their marketing during this period or pursued other strategies.

²³⁹ Mom, *Atlantic Automobilmism* pp.304-306

²⁴⁰ Brooks, *Quicks: the first 75 years* p.17

One of the most striking aspects of Belsize adverts during the early 1920s was the depiction of social aspects of motoring. As well as this, the British countryside featured prominently, from beach scenes to country estates and neoclassical architecture amidst the trees. Jeremiah argues that the inclusion of the countryside in marketing was central to the selling of cars during the interwar period.²⁴¹ Indeed country touring is a well-established theme and aspect of early automobile culture, as we have established. A Belsize advert, as seen in Figure 10, from *The Tatler* in 1919 shows two women in bathing costumes by the seaside, stepping out of a Belsize. Underneath the image, customers are encouraged to

Write for Pleasure Car List and a copy of "Home Roads," a booklet of interest to all lovers of the countryside.

The continuation of rural touring was anticipated during the war, as shown in Belsize's "after-war" car advert from 1917, which featured a quiet country road with a small car passing through a hamlet, surrounded by hills and a river with a waterfall.²⁴² In this advert the smallness of the car both drew attention to the surroundings and was probably a necessity because the firm had not yet finished an after-war prototype. Going back further, Belsize advertised in 1913 that a Belsize would secure "a place in the sun" for the coming season.²⁴³ There were also similarities in Belsize's depiction of the car in the social scene, most notable in society magazines such as *The Tatler* or *The Bystander*. An example in 1924 shows the car pulling up at a well-attended social occasion, driver and passengers in fine dress.²⁴⁴ Similar images were used before the war, with passengers climbing into cars outside large estates.²⁴⁵

²⁴¹ Jeremiah, "Motoring and British Countryside" pp.233-250

²⁴² *The Sphere* 27/10/1917 xxiii

²⁴³ *The Sporting Times* 8/11/1913 p.10

²⁴⁴ *The Tatler* 8/10/1924 xxviii

²⁴⁵ *The Tatler* 4/3/1914 iv

BELSIZE MOTOR CARRIAGES



15 H.P. TWO-SEATER BELSIZE CAR, READY FOR THE ROAD, £470
Chassis only £385. Electric Self Starter on Car or Chassis, extra £30

Many prefer the sociable, sporty two-seater to the family four-seater car, and the new Belsize illustrated above has all the attractions which gain favour for its type with the additional advantage of being able to accommodate five passengers should occasion demand.

The roomy cosy body is built big enough for three while the dickey seat—an unusually comfortable dickey seat—will carry two more.

The mechanical details of the car are characteristically Belsize—no finer guarantee of design and workmanship could be made.

A new car with twenty years' experience behind it—make Belsize your choice for the peace days.

**Write for Pleasure Car List and a copy of "Home Roads,"
a booklet of interest to all lovers of the countryside**

BELSIZE MOTORS, LTD., CLAYTON, MANCHESTER
London: The Belsize London Agency, Ltd.,
2-3, Duke St., St. James's.

The first Belsize—1896



The experience of twenty-three years contributes to the excellence of the 1919 Models.

Figure 19 - *The Tatler* No. 941 9/7/1919 vii

Ford adverts used a much starker style. Early 1920s Ford adverts showed the car and the price; the adverts are notable for the lack of background and the lack of people. Despite this there are still several examples of Ford's attempt to market country touring from the middle of the 1920s as they changed their approach. An advert from 1925 showed a Cathedral and country scene, with a car full of people, with the rather elaborate text so unlike earlier adverts:

The broad highway suddenly became theirs – when and where they liked – wind and sunshine – or sure shelter from the silver arrows of rain.²⁴⁶

Adverts showed a family in the countryside with a young child enjoying the country experience feeding chickens; other adverts show children playing with toy boats, while

²⁴⁶ *The Graphic* 7/2/1925 p.37

others showed country tearooms in the background or scenes such as the country inn. The accompanying text shows how Ford during the latter half of the decade was looking to combat prejudice explicitly:

Yes, it's a Ford. Not much like your old ideas of the Ford is it? And wouldn't it be as well to get rid of pre-conceived notions about the Ford altogether?²⁴⁷

As we have seen earlier, Ford marketing tried to promote the Ford as British, and part of this was to set it in the British countryside. The Lincoln, Ford's attempt to reach the upper-class market, was marketed with social scenes, such as the car passing through a triumphal arch. However, despite this new marketing initiative sales of passenger Model Ts continued to decline, with only 3,909 sold in 1926, compared to over 16,000 in 1920, while the Lincoln never did particularly well.²⁴⁸ It is therefore hard to judge the impact of Ford's change in marketing approach.

Crossley were selling cars that were bigger and much more expensive than both Belsize and Ford, however their marketing approaches differed very little. An advert for the Crossley 14 in 1926 shows the car in motion, speed lines flying from the wheels as a car full of passengers ascends a steep hill, with the sea, and a hillside cottage in the background.²⁴⁹ Also an advert for the 20.9 horsepower Crossley, like the Belsize advert in Figure 19 featured women exploring the countryside, stopping at the roadside, to inspect a swan on a pond.²⁵⁰ In a 1917 advert a woman driver is featured, although she is accompanied by a member of the armed forces. In the background of this advert is a steam locomotive. Again, speed is emphasised in this image, and the inclusion of the train shows a separation from communal travel in the rural environment.²⁵¹ Analysis of all the Crossley adverts in *The Graphic* in the 1920s shows the dominance of the countryside scene. Figure 20 shows that more than half featured country scenes, while 28 percent featured just the car, contrasting with just 3 percent urban and 4 percent society illustrations.

²⁴⁷ *The Tatler* 24/3/1926

²⁴⁸ Riley, Lilleker and Tuckett, *The English Model T Ford* p.195

²⁴⁹ Eyre, Heaps and Townsin, *Crossley* p.79

²⁵⁰ Eyre, Heaps and Townsin, *Crossley* p.116

²⁵¹ Eyre, Heaps and Townsin, *Crossley* p.65

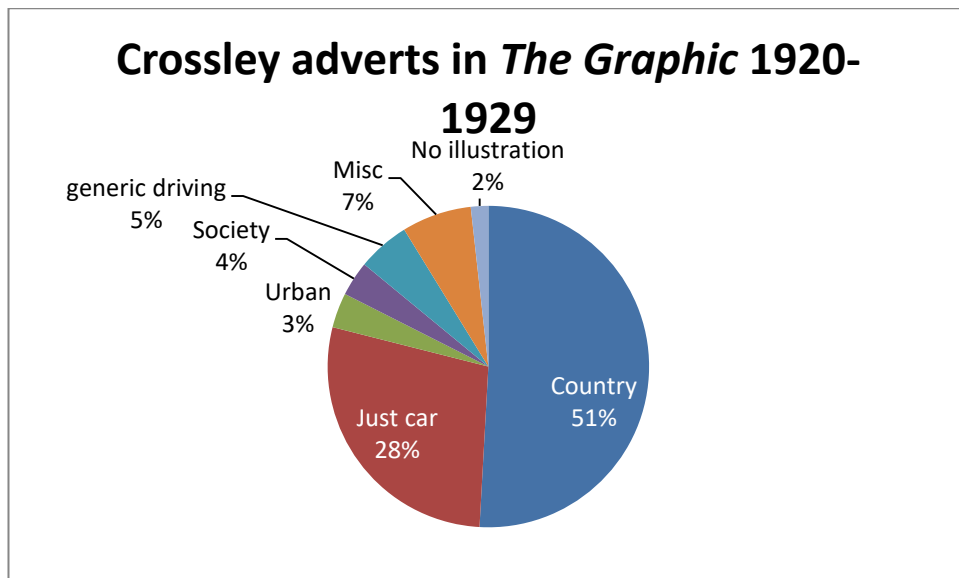


Figure 20 - Data taken from adverts issued in *The Graphic* 1920-1929. See Appendix 2 for data chart.

Overall in the marketing material of Belsize, Ford and Crossley we see an emphasis on the car both as a social status symbol and a consumer item used for leisure, to explore the countryside with both family and friends. This emphasis underscores Mom's conclusion for purchasing motives during this period

whatever the actual use, purchasing motives were decisively influenced by the expectations of pleasure during the evening spin, the weekend trip, and, most of all, the holiday tour with the family.²⁵²

This is perhaps why we see a lessening of plain advertising that noted the features and technical specifications of the car during this period. The marketing focus also tallies with the ownership motivation of the Salford businessman described by Ford sales representative Antrobus in the 1920s; the expectation and social gain of the consumption of the automobile was perhaps greater than the practical use that the vehicle brought and thus perhaps automobile consumption during this period was more hedonistic than utilitarian as Mom suggests.²⁵³ We see this middle-class family ideal represented not just in the marketing above, but also in the home videos that we will explore next.

²⁵² Mom, *Atlantic Automobilism* p.322

²⁵³ Brooks, *Quicks: the first 75 years* p.17; Mom, *Atlantic Automobilism* p.326

Home cine films

The collection of films kept at the North West Film Archive offers a unique insight into the motoring habits of a few of the North-West's motorists. At the archive there are the cine films of four families who recorded holiday films involving motoring. These families were very wealthy, evident from the combination of motoring and cine recording in the interwar period and the small sample size that survives of families who did both. There are for example the videos of the Behren family, prominent textile merchants, who lived in an affluent property in West Didsbury, Manchester. There was also the Parkinson family, of the successful chemists Parkinson Ltd of Burnley. The films show these families' travels and holidays by motorcar around the North-West, the rest of the country, and abroad, with motorcars being shipped to Scandinavia, Italy and Belgium. Dominant in these videos are shots of the countryside and scenery, as well as shots of family and friends enjoying the rural or seaside environment. Overseas motor touring features quite heavily in the films, probably because of the relative wealth of the families. O'Connell highlights that the massive deposits deterred many motorists from motoring abroad, for example £700 was needed on a car valued at £1,000. O'Connell estimated that only 2 percent of motorists were taking cars abroad, although there was a significant increase in foreign motor touring in the interwar period from 7,026 in 1924 to 17,784 in 1931.²⁵⁴

Several films also feature family members interacting with their vehicles. With children having a go at starting the car, women sitting with the baggage, and the car at the beach with several other cars, as well as a picnic out of the back. There is footage of the Parkinson family all getting together to try and turn their car around on a country track in Norway, and a male member of the Behrens family inspecting under the bonnet, then shaking his fist good naturedly at the camera.²⁵⁵ That these tinkering occasions have been captured on film alongside shots of the family show that the experience of tinkering, as well as touring, was an important part of the automobile adventure for the middle-classes during the interwar period.

²⁵⁴ O'Connell, *The car in British society* pp.91-921

²⁵⁵ NWFA Film No. 6922 No. 7290; No. 2086;

Remarkable among most of these cine films is the recording of the actual journey, with the camera mounted on the car, capturing the drive itself, as well as the points where the motorists have disembarked, an activity like the use of the action camera by those today aiming to capture the experience of speed and the scenery they are passing through. While many families tried this at some point the biggest proponents were the Rigby family of Preston. They record their motoring holiday to the Lake District in the 1930s largely by filming from inside the moving car as they go past lakes, through villages and over bridges. The film is notable for the speed with which the clips change from one place to another, emphasising the quickness with which the motorcar can go from one site of interest to the next in a well edited sequence. This is emphasised by the number of sideways shots, with the film flickering and jerking and the trees blurrily passed by the motion of the vehicle.²⁵⁶ While most of the films show a single family, isolated from other holiday makers in their locations of stopping, a few episodes show others. For example, the Hart family's collection of film from 1930-1933 show the family on the beach, the car parked on the sands, with at least 10 other cars dotted on the sands, with other families. Unfortunately, the beach is not easy to identify, although it is possible that this part of beach was only easily accessible for car users, thus distancing themselves from the "collective gaze" of non-motoring holiday makers.

The seasonality of touring is in evidence in the videos, although there are a few that include motoring in the winter months, for example skating on a frozen lake. The cine films show the families living and capturing the ideal that is depicted in the marketing that we explored earlier in this section, and evidence of the importance of the car in family tourism and mobility. In these cine films the motorcar is never pictured in the urban environment, but always in the countryside or outside the home. In some of the cine films, the motorcar had become a part of middle-class or upper-class sporting experiences. For example, the Parkinson family are filmed on an otter hunt, drinking and smoking at the side of motor vehicles while a dead otter is held up to the camera; the same family are also filmed driving to do some ice-skating and curling.²⁵⁷ The car had also formed a role in the different eras of family life. For example, one the Hart family's cine films is entitled "Hart Family before Baby Bill", in which the motorcar

²⁵⁶ NWFA Film No. 2051

²⁵⁷ NWFA Film No. 6913; 3580

features not just in holidays, but also as part of a family wedding.²⁵⁸ The car had become an ordinary part of middle-class life, a trend we identified as beginning in the Edwardian period among suburban modest motorists.

Conclusion

The First World War exposed many more people to motoring, and the interwar period saw motor vehicle diffusion increase substantially. Thus, the motorcar became a ubiquitous consumer product. With this larger awareness came the rise of the use of motoring and marques in popular culture, as demonstrated in our analysis of the Model T during the 1920s. Associated with these negative cultural references of Ford as “cheap” and therefore undesirable was a trend for patriotic consumerism. This was seized by rival native manufacturers, such as Morris, who looked to encourage these popular associations through their marketing campaigns. While price competition, both over the selling price and the maintenance cost, was important, reputation adversely affected the sales of the Model T as a private vehicle. Firms like Austin garnered wide appeal with the launch of the Seven, “a car for the man, who, at present, can only afford a motorcycle and sidecar and yet has the ambition to become a motorist”. In comparison the Model T seemed to have appealed increasingly to the commercial market especially since the American motor qualities mattered much less to the “motorcycle and sidecar” owner, who could afford either an Austin Seven or a Model T. This American vs. British paradigm also affected the fortunes of Crossley Motors, who were unsuccessful with their attempt to introduce American methods and manufacturer with their Anglo-American partnership project Willys Overland Crossley. Perhaps the Anglo-American nature of the project led to an identity crisis, with Crossley Motors’ reputation for class and quality muddled by the American cheap mass production values. Another important aspect of interwar culture was the ability for manufacturers to engage with the growing popularity of touring and motoring tourism. We see in the films at the North West Film Archive that this played an important role in family activities during this period, as incomes and leisure time increased. This is reflected in the marketing material we have examined from the 1920s.

²⁵⁸ NWFA Film No. 7290

This short analysis has demonstrated some of the complexities of interwar motoring. Thus, to understand why manufacturers were successful or not we need to look beyond price, technology and production techniques. This section has used just a few North-Western examples of the reputation of motoring firms, uses and users. Further studies of interwar motoring would allow us to build upon our understanding of interwar culture, and how, in turn, motor manufacturers were influenced by this culture in their decision-making process, either through the creation of new models, or the adaptation of existing ones.

1.5 - Chapter 1 conclusion

This chapter has explored the diffusion of the private automobile over different periods. Its aim has been to challenge some of the popular assumptions made about the diffusion of motoring. The first section showed how the relationship between cyclists and the automobile was more complicated than previous research suggests. In the second section we explored automobile clubs and the growth of the “modest motorist” and the use of the motorcycle, demonstrating that a pyramid model of diffusion based on price and income does not necessarily apply. We also saw in this section how the automobile quickly became a normal aspect of the leisure time of the suburban middle-class. In the final section we demonstrated how the Ford Model T’s comparatively poor performance during the interwar period was due, not only to price competition, but to popular perceptions of the company. We also explored how the car was used, challenging the view that there was a fundamental shift in the automobile’s purpose from pleasure to utility during the interwar period.

Engaging in the diffusion debate has also demonstrated the social construction of the automobile. Important to the debate surrounding the early automobile was the conflict between urban users, and rural non-users particularly over the disruption of dust and the violence of speed. These conflicts influenced early legislation, behaviour and design. However, private motoring is just one aspect of early automobilism. The exploration of the automobile’s social shaping, and the way in which the automobile shaped society, will be the central aspect of Chapter 2 which will look at how sociotechnical imaginaries surrounding the commercial use of the automobile is integral to our understanding of the development of automobilism. In this chapter we have explored the importance of the user and non-user in the process of technological co-construction and the development of automobile culture. This exploration will be enhanced further by analysis in Chapter 3 which will focus on the user’s interaction with manufacturers and automobile agents.

This chapter has only explored some aspects of the automobile’s diffusion, based on important historiographical debates, and the availability and familiarity of sources to the author. There is much scope for extending analysis using wider and more varied source material. For example, our analysis of cycling attitudes used two cycling

journalists based in Manchester along with a mixture of some national sources that interact with the points made: such as *Punch* cartoons, *Wind in the Willows* and national cycling journals. This is like our regionally focused look at suburban automobile clubs, which looked at the reporting of clubs based largely around Manchester. Establishing the complex attitudes of cyclists could certainly be enhanced by other regional sources, both in the UK and abroad. Similarly, wider analysis could highlight more clearly the development of “modest motoring”.

Chapter 2 - Commercial motoring

2.1 - Introduction

Here in Lancashire, where, as a cotton spinner told us, 'the cost of carriage often meant profit or no profit,' there would be the ground for a great industry.¹

This chapter explores the development of commercial motor manufacturing and use in the North-West. Compared to private automobiles, the manufacture and use of commercial vehicles has seen very little academic research. In examining the commercial aspects of the automobile this chapter provides significant new evidence that shows how commercial motoring had a big impact both on the way automobilism was imagined and developed and the way commercial motoring interacted with society.

Over a decade ago Mom described the state of research into the use and production of trucks, or commercial motors, as a "black hole in our knowledge".² Since then there has still been relatively little new research in the field. Recent research tends to focus on the interwar period and the rural environment. For example, O'Connell contributes towards our understanding of the relationship between farmers, their vehicles and the countryside.³ Law has explored motor coaches and charabancs and their contribution to social convergence in the interwar period, allowing the working-classes great access to the countryside.⁴ Jeremiah also explores the increase in rural traffic, highlighting the way in which the bus was becoming central to rural travel and noting the increasing mobility of small businesses.⁵

Apart from Mom's research on electric vehicles and their commercial use, there is very little focus on commercial motoring in the urban environment or on the origins of commercial motoring in the pre-1914 period. This is possibly due to certain themes

¹ Letter to the editor from commercial motor manufacturers Simpson and Bodman, *The Engineer* 18/6/1897

² Mom, *The Electric Vehicle* p.205

³ O'Connell, *The car in British society* pp.171-172

⁴ Law, "Charabancs and social class in 1930s Britain" p.41

⁵ Jeremiah, "Motoring and British Countryside", (2010) p.241 – Also highlighted by the *Commercial Motor* in a sketch 11/9/1925 p.806

identified by scholarship. Research has shown how the First World War exposed large numbers to motoring and prompted the mass production of vehicles for war use, which were sold for commercial purposes after the war.⁶ However, the focus on the war as the turning point for commercial motoring largely ignores the very long and slow period of experimentation and development from 1896 to 1914. The numbers of failures both in manufacturing and in use were large, but there were also several successful uses for the commercial vehicle. Studying the inception of commercial motoring is important, not only to fill the “black hole” in automobile studies but to understand more about technological and social change during the period. This change eventually led to the commercial motoring boom of the 1920s, the gradual demise of the horse-drawn vehicle and the social acceptance of the motor vehicle on city streets.

In examining the commercial vehicle, its promotion, construction and its use we see the complex interaction with the embryonic period of automobilism in general. That the commercial vehicle grew despite its technological deficiencies, (such as coping with large loads, poor reliability and its difficulty to control) mirrors the general rise of motoring. However, Mom’s diffusion theory of adventure based around “racing, touring and tinkering” cannot explain the use and development of commercial motoring. While a breakdown might have been part of the automobile adventure, for commercial motorists the need for “tinkering” could mean the loss of payment and contracts, although it must be remembered that horse-drawn haulage was not immune to issues caused by overloading, poor driving and bad roads. Similarly touring and racing were not part of the appeal of commercial motoring. This section therefore is concerned with reconciling the promotion and enthusiasm for commercial motoring with the inadequacies of technologies, the dangers of use, and the resistance to this new technology. Put simply, why did commercial motoring, unreliable and often uneconomical, begin to grow? What the evidence suggests is that commercial motoring captured the imagination from many areas of business and that the image of innovation, or progress, was as important as the development of technology and economy of use. Businessmen and hauliers perceived an opportunity to undercut competitors, while engineers and perhaps more importantly automobile enthusiasts

⁶ Mom, *Atlantic Automobilism* pp.267-270; Law, “Charabancs and Social Class in 1930s Britain” pp.42-43

promoted the commercial vehicle as a way of legitimising the automobile: if it could be proved to have economy, it could overcome opposition and resistance to its general use.

Simpson and Bodman's letter highlights the great optimism and vision for the commercial motor around the turn of the twentieth century. Yet commercial motoring took a further 25 years before it began to surpass horse-drawn transport as the primary form of road haulage.⁷ For many the decline of the horse and the arrival of the motor lorry and van is a simple case of technological determinism, as the former became less economical than the later.⁸ It forms a part of the "toy-to-tool" paradigm defined by Mom: the general acceptance in automobile historiography that the diffusion of the technology was determined by improving technology and falling costs that presupposes it. This is perhaps one of the reasons why this subject has not been explored in much detail in automobile scholarship.

The first section looks at how commercial motoring began, by exploring the powerful expectations for commercial motoring and its manifestation and promotion through the Liverpool Self-Propelled Traffic Association. It is concerned with reconciling the promotion and enthusiasm for commercial motoring on the one hand, with the inadequacies of technologies, the dangers of use, and the resistance against this new technology on the other. To explain this, we must look elsewhere for a theoretical framework. In the first chapter we explored the origins of motoring culture through theories that highlight how the user and non-user interact with each other and with designers to co-construct technologies. We will also be using the commercial vehicle in this chapter as a case study for the co-construction of technology. However, because automobile scholarship is under-theorised on the emergence of commercial motoring, we must delve further into science and technology studies to help us understand how commercial motoring emerged before serious use and design began. Jasanoff and Kim introduced the concept of "sociotechnical imaginaries" as "collectively imagined forms of social life and social order reflected in the design and fulfilment of nation-specific

⁷ The 1921 census showed a 50:50 ratio of motor and horse transport employment (get figures) which can provide a date for

⁸ Turvey, "Horse traction in Victorian London" p.38; Tarr, J. A., and McShane, C., "The Horse as an Urban Technology" in *Journal of Urban Technology*, Vo.16:1 (2008) p.15

scientific and/or technological projects”.⁹ This definition has since been refined and extended to include not just national states but “organized groups, such as corporations, social movements, and professional societies”;¹⁰ in our case, we are looking for evidence of sociotechnical imaginaries at the advent of automobilism that explain the fixation on, and development of, the commercial vehicle. In the North-West we will argue that the advent of commercial motoring provides an historical example of the power of “sociotechnical imaginaries” whereby the design and use of a technology is fuelled by imaginings of the future beneficial impact of science and technology on society.

The impact of expectations of the automobile in general has been highlighted by Mom who argued that:

the car enjoyed greater importance in societal discourse than its quantitative or economic presence would suggest... Expectations played a crucial role in the history of individual motorized mobility. They help explain why elite car cultures in European countries had so much in common. The extensive reports on foreign developments in the national public sphere functioned as a sketch of future domestic developments.¹¹

He uses the Dutch example:

in 1899, when not more than a hundred cars operated in the country, the Minister of Waterstaat (Water Management) Cornelis Lely described to a sceptical parliament a future in which automobiles would run over well-paved roads at high speeds, uniting national spaces in an unprecedented way.¹²

One of the important aspects of the general promotion of motoring, politically and socially, throughout its history is the promotion of the potential, or real, technological usefulness and utility. Mom argues that utility was emphasised as part of the culture of motoring, used as an alibi for pleasure motoring and used as a marketing tool by car supporters.¹³ The argument for utility is also a common theme in Plowden’s analysis of politics and motoring in the UK, for example arguments of utility were used in the

⁹ Jasanoff and Kim, *Containing the Atom* p.120

¹⁰ Jasanoff, *Dreamscapes of Modernity* p.4

¹¹ Mom, *Atlantic Automobilism* p. 77

¹² Mom, *Atlantic Automobilism* p. 77

¹³ Mom, *Atlantic Automobilism* p.639

campaign to reduce or change the horse-power tax.¹⁴ These arguments are also clear at the advent of motoring. During the campaigning for the 1896 Locomotive and Highways Act, there was no clear separation of pleasure and commercial vehicle interests, just the potential for the establishment of industries and users in both areas. For example, the Local Government Board, on introducing the Bill, compared the motor vehicle to cycling, a popular pleasure activity going through a boom period, as well as speculating on the ability of farmers to transport their produce.¹⁵ This argument for benefiting farmers was also put forward by Sir David Salomons (1851-1925), the founder of the Self-Propelled Traffic Association (SPTA), the UK's first motoring organisation and an influential lobbyist.¹⁶ In America early automobile advocates were also imagining economic and therefore social benefits as they envisaged the motor vehicle speeding up the transit of goods, and therefore making them cheaper.¹⁷

While these utilitarian imaginaries were important in the development of more favourable legislation they also captured the imagination of some businessmen. The first section looks at how sociotechnical imaginaries influenced the formation of the LSPTA which became a regional group that looked to shape and foster the early use and manufacture of commercial vehicles.

The second section of this chapter continues exploring commercial expectations and sociotechnical imaginaries but sets them against the realities of use; and it also explores resistance to the commercial motor during the Edwardian period, a time of experimentation. It has been found that automobile advocates were still highlighting the soon-to-be-realised potential of commercial motor technology for bettering society despite economic benefits being at best ambiguous; despite this, advocates were still able to secure political support. As in Chapter 1 this section will explore the co-construction of users and technology to see how society and technology shaped each other during this period.

¹⁴ Plowden, *The motor car and politics* pp.158-162

¹⁵ Plowden, *The motor car and politics* pp.21-22

¹⁶ Plowden, *The motor car and politics* p.27

¹⁷ McShane, *Down the asphalt path* pp.120-122

The third section explores the interwar period, focusing on the growth of the commercial motor and the “replacement” of the horse in the urban environment. It considers other factors in this technological substitution besides technological economy, including how the ideals of “modernity” and “progress” provided a pull towards the motor vehicle while images of backwardness and old technology pushed businesses away from the horse.

The final section looks at Manchester and changing traffic in the city centre. This section will continue to explore the commercial vehicle in the urban environment. It will explain the differing attitudes and solutions to rising congestion; and explore the increased technological specialism and variety of commercial motor vehicle uses, by looking at how councils, planners and manufacturers responded, and help create sociotechnical imaginaries.

2.2 - The Liverpool Self-Propelled Traffic Association and the inception of commercial motoring: the power of potential and sociotechnical change

The formation and work of the LSPTA is a particularly good example of the impact of “sociotechnical imaginaries” on the development and use of a technology. One of the striking aspects of the LSPTA’s formation as a motoring organisation was that very few, if any, of the members were automobile owners at the time of its formation; although this is similar to other early automobile clubs, this is significant as it highlights the importance of the imagined, which predates the use and, in many cases, the design of automotive technology.¹⁸ At the inaugural dinner of the LSPTA in November 1896 the speaker Sir David Salomons, founder of the Self-Propelled Traffic Association, articulated the “sociotechnical imaginaries” for commercial motoring:

I can picture to myself that in the next ten or perhaps five years, the whole of the heavy traffic, as well as the public conveyances of this country will be propelled by motors, probably steam, instead of by living horse power... motor traffic is the right thing in the interest of the community, adding not only to the prosperity of the manufacturing classes, but extending also a helping hand to the working population.¹⁹

This raises the question: why was Liverpool, and not another area of the country, susceptible to the potential of the automobile for trade so that they formed an organisation devoted to the promotion of commercial motoring?

The North-West of England was the centre of the world’s textile trade.²⁰ The factories and warehouses of Manchester and surrounding towns, known as “Cottonopolis”, and the port city of Liverpool saw the bulk of the UK’s annual transportation of 1,664 million pounds of raw cotton and the export of 5,125 million linear yards of cloth in

¹⁸ At the first meeting of the club in November 1896 the speaker Sir David Salomon was described as “unique” in his position as having actually tested automobiles *Automotor and Horseless Vehicle Journal* Nov 1896 p.55

¹⁹ *AHVJ* November 1896 p.47

²⁰ 87.1% of Britain’s cotton textile workers were employed in Lancashire and Cheshire, 1898-99: L. G. Sandberg, *Lancashire in Decline: a Study in Entrepreneurship, Technology, and International Trade* (Columbus: Ohio State University Press, 1974) p.3; Explanation for this concentration can be found in Farnie, *The English cotton industry and the world market* pp.45-77; 500,000 people were employed in the industry in 1911 and cotton imports doubled between 1870 and 1912 to 2 billion pounds weight: Wyke, “Rise and Decline of Cottonopolis” p.98.

1890.²¹ The haulage economy of the region therefore was large and the LSPTA was formed partly because of the economic rivalry created by the opening of the Manchester Ship Canal in 1894, which was to spark the Liverpool business community and Chamber of Commerce into action from which the LSPTA originated. Liverpool and its businessmen looked at many ways of competing, including merchants opening branches in Manchester to retain control over timber, grain and cotton; as well as dredging the Mersey bar to extend accommodation for trading at Liverpool.²² Liverpool also looked to technology as an imagined remedy to its new found economic problems. Before the LSPTA was formed the Liverpool Chamber of Commerce created a “Light Railways Sub-Committee” in March 1896, set up to tackle the high cost of haulage imposed by the existing railways and the Manchester Ship Canal by looking at alternatives.²³ Some of the proposed alternatives included motorised road transport and various hybrid railway systems. For example, Alfred Holt’s (later a member of the LSPTA) “Plateway scheme”, which was a hybrid railway-motor vehicle system; a system designed by M.E.R Calthrop (also a member of the LSPTA) that was designed to hold loaded “lurries”; a scheme proposed by a Mr Kennedy for utilising “road locomotives”; and a scheme for intercity electric tram haulage.²⁴ This problem occupied the committee for several years and the LSPTA was consulted on the merits of different schemes.²⁵ The Liverpool business community therefore was engaged in making haulage cheaper when the 1896 Locomotives and Highways Act was passed and motorised haulage was embraced as offering great potential. The LSPTA was formed after a lecture at the Liverpool Chamber of Commerce arranged by Edward Shrapnell-Smith (later Managing Director of a large haulage firm and the first editor of the *Commercial Motor*) and Worby Beaumont entitled “Motor Vehicles for Heavy Traffic” read in September 1896 which prompted interest and the formation of a regional council of the SPTA.²⁶ Membership was a mixture of commercial shipping

²¹ Sandberg, *Lancashire in Decline* p.4 provides national figures, noting the dominance of the Lancashire industry.

²² Farnie, *The Manchester Ship Canal* pp.29-32

²³ Liverpool Library archives 380 COW 2/18/1 – Special Committees Minute Book 1896 meeting 8/1/1896

²⁴ Liverpool Library archives 380 COW 2/18/1 – Special Committees Minute Book 1896 meeting 5/2/1896; 28/2/1896 and 14/7/1896

²⁵ Liverpool Library archives 380 COW 2/18/1 – Special Committees Minute Book 1896 meeting 22/10/1897

²⁶ *AHVJ* January 1897 p.141

interests, railway interests, local engineers and gentlemen. The first speech at the inaugural dinner was by the vice-president Alfred L. Jones, managing director of Elder, Dempster and Co., merchant shippers, who is reported to say:

He (the speaker) had attached himself to the society for the sole purpose of obtaining improved means of getting cargo to and from Liverpool and adjacent places.²⁷

Alfred Jones was not alone. There were members of the Liverpool Chamber of Commerce, including the President F. C. Danson and Secretary T. H. Barker. Other shipping interests included Alfred Holt, founder of a large shipping firm the Ocean Group, whilst railway attendees included the Midland Railway, the Lancashire Yorkshire Railway, the London North West Railway, the Mersey Tunnel Railway and the Liverpool Overhead Railway. The Manchester Ship Canal was also affecting railway profits. Prominent local engineers included City Engineer Henry Percy Boulnois; the Musker Brothers, hydraulic engineers who would soon manufacture commercial vehicles; Professor Hele-Shaw, who was to have a distinguished career as a leading automobile engineering expert; and the Secretary Edward Shrapnell-Smith.

It could be argued that this group was swept away by the enthusiasm that surrounded the 1896 Act, and Salomons' predictions. However, the association's persistence suggests a sustained enthusiasm, in the face of disappointment at a lack of practical success, and scorn of other engineering communities. The "Light Railways Sub-Committee" schemes petered out and came to nothing as their suggestions were criticised for being too theoretical and not well enough developed, and the committee looked instead at a traditional option of a new railway line. Elder, Dempster and Co. offered a tender for road vehicles that could haul at least 1,000 tons a week from Liverpool to Manchester in 1897, supported by the LSPTA and reported in national motoring journals the *AHVJ* and *The Autocar*. However, response was poor and the tender was not given. The *Manchester Guardian* reported on the tender:

Those prominently connected with the so called self-propelled traffic movement in Liverpool have made no attempt to conceal their real object, viz. prevent the diversion of shipping to the Manchester Port.²⁸

²⁷ *AHVJ* Nov 1896 p.43

The day after the *Manchester Guardian* report, at a dinner of the Manchester Association of Engineers, there was laughter heard when the proposal was mentioned.²⁹

In 1898 the LSPTA organised the first of their three heavy traffic trials which had two stated aims:

to arrive at a type of Heavy Motor Wagon suitable for trade requirements in Liverpool and neighbourhood, which shall be capable of economically taking the place of horse haulage and of competing with the existing railway rates, in the transport of heavy loads of goods over considerable distances.

And further:

Encourage builders to experiment in the construction of vehicles upon the lines indicated, and to provide an opportunity for the public to see something of the progress being made in this country.³⁰

The first trial was underwhelming. There were four entries, although the entries reflected national interest in the problem of commercial traffic. They include Coulthard and the Lancashire Steam Motor Company (LSMC) based in the North-West; Thornycroft, based in the South-East; and the Liquid Fuel Engineering Company, based on the Isle of Wight. There was also a wide range of attendees including government departments, automobile clubs (the Automobile Club of Great Britain and Northern Ireland [ACGB&I] and the Self-Propelled Traffic Association), corporations and businessmen. The motoring press such as *The Autocar* predictably hailed the trial an important technological learning experience and a success despite the few entries; however other reports were less enthusiastic.³¹ *The Times* declared the trials interesting, although this was due to the “entire novelty” of the event,³² while the *Manchester Guardian* took a more negative view reporting that:

²⁸ *Manchester Guardian* 14/2/1897

²⁹ *Manchester Guardian* 15/2/1897

³⁰ E. Shrapnell Smith ed., *Liverpool Trials of Motor Vehicles for Heavy Traffic Judges Report* (Winstanley and Watkins, Liverpool: 1898) p.22

³¹ *Autocar* 4/9/1898

³² *Scotsman* 1/6/1898 using a *Times* report.

we are afraid that those who look to cheapen the cost of carriage between Lancashire towns and the docks will be little encouraged by the result of the experiments at Liverpool

going on further to imply that the expense and effort was a waste.³³

However, the LSPTA continued with increasingly successful trials in 1899 and 1901 (there was no trial in 1900 because of a clash with the Thousand Mile Trial, organised by the ACGB&I). By 1901, the number of competing firms had swelled to 10. The five-day trial received press that moved beyond the factor of novelty that the first trial had provided. Indeed, regional papers like the *Wellington Journal* remarked:

Whatever misgivings were occasioned by the trials of previous years must have been dispelled by the tests which have been concluded, as these have undoubtedly demonstrated that the motor-waggon is a practical and commercial success.³⁴

The trials were of a similar nature to the first, the last trial conducted over 5 days, including roughly 35-mile trips, laden with goods from Liverpool to Manchester and Liverpool to Blackburn.³⁵ Rules and classes of entry varied only slightly.

These trials were moulded by the challenges of the area which in turn influenced the development of fledging heavy vehicle design. Most of the judges were members of the LSPTA. The aims of the trials as stated above included influencing vehicle builders, with the emphasis on heavy tonnage and thus competition with railway haulage: vehicles had to have a specified flat area for loading and loads were a minimum of 2 and 5 tons for two classes of entry. The route was set at 30 to 40 miles, a similar distance to that between Liverpool and Manchester, and incorporated the steep gradients of Liverpool and the poor roads between Liverpool and Manchester. Manoeuvrability tests involved negotiating the dockyards.³⁶ Thus the manufacturers designing vehicles for this trial bought into the expectations of the LSPTA: that heavy

³³ *Manchester Guardian* 1/6/1898

³⁴ *Wellington Journal* 15/6/1901 p.12

³⁵ *Lancashire Evening Post* 8/6/1901

³⁶ *AHVJ* November 1897 p.66

goods haulage had a rosy future (reiterating Simpson and Bodman). Reinforcing the functions of the trial was the enthusiasm of local businessmen for starting motor vehicle haulage. During the first trial it was made known to prospective competitors that:

A prominent member of the Association... was willing to receive, on the recommendation of the Judges, one or more vehicles to work in the heavy goods traffic of Liverpool and neighbourhood, on trial, during a period of one month, and further, that he is prepared to purchase fifty vehicles in all.³⁷

Using Mom's model in Figure 1 for the construction and innovation of technology as described in the literature review, the LSPTA acted, especially in hosting their trials as an influential "Intermediary actor", as well as identifying an important body of "potential users" and functions. This was to influence the innovative direction of the various manufacturing companies who competed in the three traffic trials hosted by the LSPTA.

The rules and specifications of the heavy traffic trials, designed for haulage work, can be contrasted to the French *Les Poids Lourds* or "heavy-weight motor-car competition" of 1897 where the LSPTA only observed one vehicle that might be capable of meeting the needs identified in Liverpool. The French trial was notable for its variety including passenger vehicles, parcel vans, a charabanc, a tractor and an omnibus.³⁸ With specific functions in mind the LSPTA lobbied for legislation change, specifically the removal of the 3 ton tare limit, which after each trial was highlighted as an issue holding back the development and commercial adoption of motorised haulage.³⁹ During the 1901 trial, there was only one vehicle that was actually built within this limit, demonstrating the inadequacy of the weight restriction.⁴⁰ This influenced the change of legislation in the "Heavy Motor Car Order" of 1904 in which the Local Government Board increased the

³⁷ Shrapnell Smith, *Liverpool Trials of Motor Vehicles for Heavy Traffic* p.29

³⁸ *AHVJ* August 1897 p.453; *Judges Report 1898*

³⁹ Judges report does not survive but is reported in *Yorkshire Post and Leeds Intelligencer* 26/10/1901

⁴⁰ Judges report does not survive but this information is reported in *Edinburgh Evening News* 26/10/1901

weight restriction to 5 tons.⁴¹ This course was advocated in parliament by Walter Long, president of the Local Government board and LSPTA supporter, and local MP Arthur Stanley, son of Lord Derby who was president of the LSPTA.⁴²

The LSPTA also encouraged innovation through its varied lecture series. These included a wide variety of automobile related topics. A scientific examination of wheels was made by Prof. Hele-Shaw.⁴³ “Mechanical Haulage on Common Roads” by Worby Beaumont explored the technological requirements for economical haulage and compared horse-drawn and motor vehicle economies.⁴⁴ There was also a detailed scientific paper entitled “Compressed Air as a Motive power for road carriage” by Rhys Jenkins. Practical experimentation was covered in a lecture by Dan Simpson in 1898, manufacturer of experimental commercial vehicles based in Manchester. The LSPTA took their discussions beyond Liverpool: Shrapnell-Smith toured the country conducting a heavy vehicle lecture series for Corporations, motoring clubs and universities.⁴⁵

By 1902 the LSPTA decided their 1901 trial was their last:

With six years’ “history” behind them the members of the LSTPA have now reached the end of a stage in the career of that body, namely the position of having to pronounce a benediction upon Heavy Motor Traffic. From this time forward, it is expected that the Association will be conducted more upon Club lines, although its watchfulness over the interests of heavy automobilism will in no ways be relaxed.⁴⁶

Although there are no definitive national figures, the LSPTA estimated that the number of heavy motor vehicles in the UK in 1901 was around 100.⁴⁷ This was a long way from the imaginings of David Salomons five years previously. Despite this the sociotechnical imaginaries of widespread motor haulage remained undimmed and again the idea that

⁴¹ *Commercial Motor* 21/9/1905

⁴² Walter Long was in attendance at the discussions of the LSPTA judges’ report in 1901 “He promised that the question of increasing the permitted weight of commercial vehicles should receive the most careful consideration of his depart, for he was fully alive to its importance.” *Yorkshire Post and Leeds Intelligencer* 26/10/1901; *Commercial Motor* 16/3/1905

⁴³ *AHVJ* December 1897

⁴⁴ *AHVJ* Feb 1897 p.196-200

⁴⁵ *Motorcar Journal* 22/12/1900 p.705

⁴⁶ *Motorcar Journal* 31/5/1902 p.288

⁴⁷ Reported in *Yorkshire Post and Leeds Intelligencer* 26/10/1901

commercial motoring could improve society was used in campaigning for legislative change leading up to the 1903 Motor Car Act. The ACGB&I used the following arguments in their manifesto addressed to MPs and local councils:

They [the ACGB&I] look upon it [commercial haulage] as likely to become a most valuable national asset, a beneficial factor in the general life of the community. They believe that it will afford speedy and cheap transport of agricultural produce and consumption; that it will provide cheap and speedy communication between outlying districts... and that it is likely in the same way to prove an important factor towards the solution of the problem of the housing of the poor.⁴⁸

The LSPTA has been described by the British automobility historian Nicholson as having “little relevance to the mainstream motoring scene” and one of the final legacies of Salomon’s move to promote motoring from 1895 to 1897.⁴⁹ The idea of a “mainstream” supposes that commercial motoring followed private motoring and that, as the technology of private motoring grew more reliable, so its application for economy created commercial opportunities. This view might be supported by the relatively slow growth of commercial motoring. There were supposedly only 100 heavy motor vehicles in 1901, while Plowden estimates that in 1907 commercial vehicles made up only a quarter of the number of private vehicles: 8,000 out of a total of 32,500 registered vehicles. In 1905 the *Commercial Motor* estimated 3,000 commercial motors, compared to 16,000 registered private vehicles, a similar proportion.⁵⁰ However, the explanation, that commercial motoring followed the mainstream has been shown to be inadequate at explaining the very early enthusiasm for the commercial vehicle in the UK.

Conclusion

In this analysis the LSPTA has been shown to be a symptom of the expectations and sociotechnical imaginaries that formed around the automobile at the end of the nineteenth century, which they then promoted. Commercial motoring was not a “sub-

⁴⁸ *Leamington Spa Courier* 7/3/1902 reporting on the views of the ACGB&I

⁴⁹ Nicholson, *Birth of the British Motor Car*, Vol.3 p.444

⁵⁰ Barker, T. C. and Gerhold, D., *The Rise and Rise of Road Transport, 1700-1990* (Cambridge: Cambridge University Press, 1993) p.59

category” of the automobile, but was integral, along with the pervasion of the bicycle, to explaining why the automobile was favourably legislated for. The automobile’s future function in society, as a cheap and fast carrier of goods, to the benefit of society as a whole might have been an alibi for some campaigning private motorists, or used as an argument to combat those who resisted the automobile as a rich man’s plaything. However, for the LSPTA the imaginaries of technological progress represented high expectations, not necessarily for the greater good, but for business. An automobile commentator wrote of the LSPTA:

In Liverpool the question of automobilism has been taken up with commendable zeal and enterprise – not, we think, from an academic or philanthropic desire to cheapen the cost of transit of the poor man’s coals, or his beer, or anything else which is his, but in a practical spirit of enlightened selfishness, which, after all, is perhaps the best way of regarding any question of public convenience.⁵¹

The LSPTA did not necessarily directly influence engineers and manufacturing firms to begin experimenting and producing commercial vehicles (apart from the Musker Brothers, hydraulic engineers from Liverpool, who were members of the LSPTA and subsequent commercial vehicle manufacturers). Yet their heavy traffic trial provided an important proving ground for the experiments of early firms such as Thornycroft and the Lancashire Steam Motor Company (LSMC), whose designs reflected the expectations of the LSPTA for intercity heavy goods transit, inner city manoeuvrability and economy of use. In this we see how expectations highlighting potential users and functions could drive innovation in a particular direction. From a regional perspective the LSPTA was a manifestation of the tensions created by the large regional textile and manufacturing economy. Transport was a large factor in this economy. The railway companies and the newly built Ship Canal threatened the profits of Liverpool’s merchant shippers and the sociotechnical imaginaries surrounding the automobile provided an opportunity for renewed profits. Nationally, and for automobilism, the LSPTA was an important link between these imaginaries and the creation of economic realities which were slow in being realised.

⁵¹ *AHVJ* Dec 1897 p.99

2.3 - Imaginaries versus realities: experience, resistance and commercial manufacturing in the Edwardian period

Technological innovation often follows on the heels of science fiction, lagging authorial imagination by decades or longer.⁵²

The efforts to exploit the potential of commercial motoring were seen in the formation and actions of the Liverpool Self-Propelled Traffic Association (LSPTA). However, by 1902 the LSPTA had relaxed in its role as chief promoters of the commercial vehicle; and business enterprises had begun to take more readily to the motorised commercial vehicle.⁵³ Despite the increase in the number of firms manufacturing and using motorised haulage vehicles from 1900 to 1914, use was generally limited to larger companies, corporations or specialised haulage firms which could afford both the initial capital cost and the constant maintenance of early commercial vehicles. It was noted, even by enthusiastic motoring proponents, that horse-drawn transport was more economical over short distances.⁵⁴ There was a rising disparity in diffusion between different forms of transport. For example, motorised taxis virtually replaced horse drawn cabs in British cities between 1907 and 1914.⁵⁵ Yet commercial vehicles were markedly slower to diffuse, let alone replace the horse-drawn wagon and cart. It was not until the interwar period that commercial motoring started to grow rapidly. This was partly due to the long period of experimentation and use pre-1914 and partly because the First World War exposed large numbers to motoring and prompted the mass production of vehicles for war use, which were sold for commercial purposes after the war.⁵⁶ The period of experimentation was long and slow, and the number of failures in manufacturing and in use was large. This is typified by the results of the 1911 census which records 43,094 chauffeurs, commercial drivers and motorised cab

⁵² Jasanoff, *Dreamscapes of Modernity* p.1

⁵³ *Motor Car Journal* 31/5/1902 p.288

⁵⁴ *Manchester Guardian* 30/12/1905

⁵⁵ The number of motorised taxis in London went from 723 in 1907 to 6,397 in 1910, in Georgano, N., *A History of the London Taxicab* (Newton Abbot: David and Charles, 1972) pp.59-60

⁵⁶ Mom, *Atlantic Automobilism* pp.267-270; M. J. Law, "Charabancs and Social Class in 1930s Britain" pp.42-43

drivers,⁵⁷ while the number of people in horse-drawn transport employment, rose from 347,655 in 1901 to 374,587 by 1911.⁵⁸

This section will continue with the important question: why did commercial motoring, unreliable and often uneconomical, begin to grow? We have begun to answer this by exploring the power of sociotechnical imaginaries and related economic expectations. In this section we will explore how these expectations and imaginaries translated into reality by exploring the users, manufacturers, resisters and uses of the commercial motor vehicle. In doing so we shall see how society and technological innovation interact to develop technologies such as the commercial vehicle.

Users and uses

The first commercial vehicle in Manchester was bought by haulage firm Sutton & Co. in June 1897; it was reported to “set the population agog”.⁵⁹ While this was an *Autocar* exaggeration, it highlights an important early aspect of automobilism: the power of novelty. Some businessmen looked to exploit the spectacle and novelty of early motor vehicles for advertising and tourist entertainment. Figure 21 shows the first known automobile in Manchester bought by Mr Goodwin to promote his soap business.⁶⁰ This was not necessarily a radical new development as consumer goods, like soap and tobacco, were advertised on trams and horse-drawn transport offering the advertiser the freedom to move their adverts. However, as Richards argues, the use of novelty and spectacle was an important aspect of advertising that was already well established by the late Victorian era and can explain the early use and purchase of many automobiles in Manchester.⁶¹ Several other central businesses followed suit, and it was reported in 1898 that:

The motor-car is making headway. There have been several in the Manchester streets lately, chiefly for advertising purposes.⁶²

⁵⁷ Anonymous, *Census of England and Wales 1911: General Report with Appendices* (London: His Majesty's Stationery Office, 1917) pp.110-112

⁵⁸ Ibid. pp.110-112

⁵⁹ *The Autocar* 12/6/1897

⁶⁰ Described in Norris and Lomax, *Early Days* p.7

⁶¹ Richards, T., *The Commodity Culture of Victorian England* (California: Stanford, 1990) p.21

⁶² *AHVJ* April 1898 p.250

It is no surprise therefore that the first recorded motoring offence in Manchester was committed by a driver of a vehicle advertising a pantomime to passers-by in the city centre.⁶³ Similarly one of the first motoring prosecutions in Liverpool was an advertising vehicle on Lime Street.⁶⁴



Figure 21 - Goodwin's Lutzmann Benz, 1896; Science and Industry Museum Archive, YMS 0197.2

As well as advertising in the city centre, the novelty and spectacle of the motor car was used to good effect at the North-West's most popular holiday resorts. The Blackpool Motor Car Company was formed in July 1897 with the aim of "running a service of autocars for pleasure trips in Blackpool and district."⁶⁵ This was quickly followed by the Llandudno Motor Car Company, the Motor Touring Company of Southport and Deacon and Son of Llandudno. The Blackpool Motor Car Company provided vehicles for both

⁶³ *AHVJ* Feb 1898 p.176

⁶⁴ *AHVJ* December 1897 p.94

⁶⁵ *Autocar* 31/7/1897

the 1898 and 1899 Liverpool Heavy Traffic Trials to be put at the disposal of the organisers, an interesting move, especially considering the season of the trial. This demonstrates how different early automobile interest groups were integrated in the early years of motoring.

The use of the automobile for advertising is a very early example of a technology being used for purposes it was not designed for, where some of its perceived negative aspects were positives: excessive noise, steam or smoke would draw attention, and breakdowns and unreliability were not necessarily going to cause a loss of exposure. User experimentation has been shown to be an important part of the development of technologies, which has been highlighted by Kline and Pinch in their study of resistance in rural America where farmers used automobiles as stationary power sources, which was part of Ford's development of the Model T advertised as "The Universal Car".⁶⁶

We also see the automobile being used unusually in the democratic process; used around the country to transport voters to the polls during elections. Not only did this help increase turn out but helped introduce people to the experience of motoring, and thus help change opinions, a view held by J. T. Ward:

The general election of 1906 did more to allay popular prejudice against the motor car in one month than had been done in years by motoring organisations and the motoring press, but the general election of 1910... will do far more.⁶⁷

Tariff reform was one of the key issues during the period, and Ward argued that the private motorist might be interested in using their cars to transport voters in its interest.⁶⁸ The election was also significant for Manchester's motor businesses who were "besieged for cars" in 1910, offering them a chance for what was a mass test drive of their vehicles, both new and second hand, as well as claiming exorbitant hire fees from political parties, of up to six guineas.⁶⁹ The issue of the unregulated use of the car on Election Day was to be a political issue in the coming decades, with the

⁶⁶ Kline and Pinch, "Users as agents of technological change" pp.783-785

⁶⁷ *Manchester Courier* 14/1/1910

⁶⁸ *Manchester Courier* 19/1/1910

⁶⁹ *Manchester Courier* 14/1/1910; 19/1910

Labour Party arguing in the interwar period that the Conservatives gained an unfair advantage, as their supporters were much more likely to be automobile owners.⁷⁰

Haulage

In no other centre of population does motor haulage enjoy greater opportunities of usefulness than in Manchester and Lancashire generally.... Carriers are using motor-luries in transferring cotton from the Ship Canal docks directly to the mills in which it is spun in various surrounding towns. Manufactured goods are taken by motor-lurry directly from the mills again, to the Manchester warehouses and docks to be shipped abroad.⁷¹

The *Manchester Guardian* reiterated the potential and the expectations for haulage in the North-West, ten years after the passing of the 1896 Act. But what were the practical experiences of haulage in the North-West and how was it developing? We have already shown how modest the numbers of haulage vehicles were during this period. Although Sutton and Co. bought a commercial motor vehicle in 1897 they continued using horse-drawn vehicles, as evidenced by a horse related prosecution in 1905.⁷² This was common practice well into the interwar period as the horse was generally more economical for short range haulage work. One of the best sources for early road haulage is the Road Carrying Company (RCC), formed in 1902 with a capital of £20,000.⁷³ This is largely because it was managed by Edward Shrapnell-Smith, former Secretary of the LSPTA and later editor of the *Commercial Motor*, and thus keen promotor of the commercial vehicle. The RCC had 14 lorries which were used for various contracts in Lancashire, mainly raw cotton haulage from the docks to the Lancashire mills.⁷⁴ In 1903 the firm invited a southern journalist reporting for the *Motor Car Journal* to accompany one of their vehicles on a work contract taking goods to a Blackburn Mill. The journey began from the RCC's Liverpool depot, and the report begins with the journalist waiting for his lorry to come back from a previous job, which starts with news of a breakdown:

⁷⁰ Plowden, *The motor car and politics* pp.265-266

⁷¹ *Manchester Guardian* 8/8/1906

⁷² *Manchester Guardian* 20/1/1905

⁷³ *Motorcar Journal* 22/2/1902

⁷⁴ *Motorcar Journal* 6/12/1902 p.780

“Where is number eleven?”... “Towing in number fourteen,” comes the ominous reply... A small connection to one of the pumps had fractured three miles from home.⁷⁵

Of the journey itself the author offers a vivid description from his perch on a sack between the driver and the fireman. On leaving Aintree in the dark he describes being plunged into darkness... the man was steering by the line of the off-side kerb, or the hedge.

He further comments on the trying road conditions:

the macadam was shocking. The mud squelched and oozed... These holes in the road are anguish, but the driver apologetically assures me that he now knows most of them, and avoids them to ensure his bonus for the condition of the wagon.⁷⁶

This bonus and the knowledge of the driver were clearly important factors in the economy of the enterprise and is further marked by the firm’s practice of driver changeover at a half way point so knowledge of particular roads is increased.⁷⁷ The journalist then goes on to describe an innovation instituted by the firm: a series of regularly placed clean water tanks for the use of the company’s steam vehicles, solving the problem of taking on mud and silt from water supplies such as the rivers and canals. Significantly this was also involved engaging the residents, who were reportedly offered rewards for reporting strangers who used these watering stations.⁷⁸ Working with residents was part of the job and later the journalist describes the drive through Preston at three mph during the night to minimise disturbance to residents.⁷⁹ The journey continues until, with a certain degree of poetic license:

with a crunch and a knock, we stop dead... It is 1:28am, and we are stranded in the wilderness.⁸⁰

⁷⁵ *Motorcar Journal* 3/1/1903

⁷⁶ *Motorcar Journal* 3/1/1903

⁷⁷ *Motorcar Journal* 3/1/1903 p.865

⁷⁸ *Motorcar Journal* 10/1/1903 p.864

⁷⁹ *Motorcar Journal* 17/1/1903 p.885

⁸⁰ *Motorcar Journal* 3/1/1903 p.865

The driver and the fireman left to get assistance and a few hours later the vehicle was helped out of a ditch. After more bad roads they made it to Blackburn at about 8am, a journey of 40 miles in just over 12 hours.⁸¹ The motoring journalist concludes with predictable optimism that, while problems have not been entirely overcome, in a few years “success is assured and complete, but come it will and must”, echoing the belief in the imaginaries of other motoring advocates over a ten year period.⁸²

However, the narrative of the motoring experience belies this conclusion and highlights some clear technological and environmental deficiencies. Over the 40 miles the vehicle stops three times to take on water. This is remedied by water stations placed by the haulage company along the route, however this is only effective on set routes. The poor weather conditions and the narrow and poor roads are repeatedly highlighted as a serious issue and were the cause of the two-hour stoppage during the journey. The need for experienced drivers is highlighted as important in managing the roads, gradients and speed, suggesting long periods of training. There is also the recognition of the need to avoid disturbance in residential areas; here we shall go into more detail when we look at resistance. Finally, the account of the amount of infrastructure and staffing required reveals other deficiencies. The depot is described at the beginning as extensive, but garage facilities were also needed at the halfway point, and in Blackburn.

Other industrial sectors began to show an interest in the potential of motorised haulage although there is little detail as to the success and problems of these ventures; nonetheless they show how widespread business interest was. In agriculture, the Duke of Bridgewater began using motor vehicles to transport milk from farms in Worsley as early as 1899.⁸³ Later the Cheshire Milk Producers Association formed the Manchester Motor Transport Company with a capital of £20,000 with six steam lorries: they also had agencies for pleasure vehicles on Deansgate in the city centre.⁸⁴ There are many other examples, including postal services, the collection of refuse, and general local

⁸¹ *Motorcar Journal* 3/1/1903 p.885

⁸² *Motorcar Journal* 3/1/1903 p.885

⁸³ *Motorcar Journal* 19/5/1899 p.163

⁸⁴ *Motorcar Journal* 30/11/1901 p.701; *Motorcar Journal* 22/3/1902 p.43

Corporation use.⁸⁵ Importantly there was also clear interest from Lancashire's textile industry. *The Textile Manufacturer* reported in 1901 that:

The convenience of some regular system of transit of this kind will be invaluable.

Motor-vehicles travelling from, say, Liverpool could serve the various Lancashire towns with raw cotton and other imported goods direct from the dock.⁸⁶

Although in 1909 the *Commercial Motor* reported that only just over 5 percent of dock haulage in Manchester was by motor traffic,⁸⁷ it must be remembered that early commercial motor vehicles, like pleasure vehicles, were unreliable and that a breakdown for a heavier vehicle could cause significantly more damage than that caused by lighter pleasure vehicles. There are several serious instances of accidents reported in and around Manchester during this period.

Opposition, problems and promotions

In Chapter One we highlighted aspects of automobile resistance which was dominated by rural disruption, class arrogance and speed. We also highlighted how users and manufacturers were encouraged to change habits and technologies respectively to combat resistance and its threat to the automobile through legislation. We have seen above how automobile advocates used the potential for commercial motoring to legitimise the use of the automobile for leisure. However, the realities of commercial vehicle use also brought resistance that made the sociotechnical imaginaries hard to accept for the non-advocate. This was something that advocates such as the LSPTA and those with a vested interest in commercial motoring, such as the *Commercial Motor* and the Commercial Motor Users' Association, as well as some early motor haulers, were keen to combat.

Opposition quickly arose to the big, smelly, noisy steam vehicles that began to be used on the North-West's roads. Commercial vehicle incidents were often publicised, and records of prosecutions were numerous throughout the period. Significant amongst these were several serious incidents in the hilly East Lancashire towns, where incidents

⁸⁵ *Motorcar Journal* p.446; The Liverpool Corporation had several LSMC vehicles *Motorcar Journal* 14/2/1903 p.953

⁸⁶ Quoted in the *Motorcar Journal* 27/4/1901 p.120

⁸⁷ *Commercial Motor* 25/2/1909 p.523

of brake failure, damage to property, and injury and death for pedestrians and passengers were recorded in the *Manchester Guardian* and *Manchester Courier*. For example, a crash in Bolton in 1905 involved a motor waggon going out of control up a footpath leading to the death of one pedestrian, and the severe injury of another pedestrian and the mechanic, leaving the driver in shock.⁸⁸ The newspaper used this fatal incident as an example of “dangers attending the use of motor waggons.” There were records of other mechanical failures and incidents with tram tracks, involving both the death of a horse wagon driver and the vehicle overturning causing the death of a driver, along with several instances of pedestrians being killed by motor vehicles, including the death of a boy in 1907, and the death of a tram passenger alighting in 1913.⁸⁹ As well as the fear of injury, death and damage to property, there is evidence of more general complaints including improper handling, for example, proceedings were brought against a driver for letting off too much steam and smoke causing:

annoyance of pedestrians and others using the road, particularly those in charge of horses.⁹⁰

A complaint by a community deputation to the Manchester Watch Committee in 1906 sums up some of the common issues with heavy vehicles. They complained about the vibration, “appalling noise”, “most obnoxious smell”, damage to the roads and the difficulty of getting to sleep caused by the motor omnibuses, which saw the application for more licenses get postponed by the Manchester Corporation.⁹¹

As we have seen in our trip with the Road Carrying Company, the disturbance of local residents was a widespread concern, with the firm going slowly through Preston to reduce noise and quell resistance to the commercial motor. Noise and poor driving were generally blamed by opponents to commercial motor vehicles. As well as the prosecution for letting off excessive steam in 1909, a 1902 case also shows how noise and driving were viewed. A motor waggon was alleged to have scared a horse pulling a heavy load, resulting in injury to the horse-driver, by creating a scraping noise and the driver failing to stop his approach. Despite evidence provided to the contrary the

⁸⁸ *Manchester Courier* 6/1/0/1905

⁸⁹ *Manchester Guardian* 10/10/1907; *Manchester Guardian* 10/11/1908; *Manchester Guardian* 22/11/1913

⁹⁰ *Manchester Guardian* 19/1/1909

⁹¹ *Manchester Guardian* 17/8/1906

driver was convicted.⁹² To try and combat this focus on the abilities of the driver the Commercial Motor Users' Association (CMUA) and the *Commercial Motor* held an annual "Parade and Prize Scheme for Good Driving" starting in 1907.⁹³ It appealed to business owners as follows:

It is, of course, a matter of no small sacrifice, for an owner to allow even one of his vans, lorries, or tractors to be taken out of service on so busy a day as a Saturday, but we think that both the movement as a whole and the interests of drivers deserve consideration.⁹⁴

The prize scheme involved drivers answering several questions such as:

Number of days motor has been laid up through fault of driver [and] number and character of accidents on the road, other than trivial ones.⁹⁵

While the *Commercial Motor* looked to encourage drivers, this provoked a reaction from a Manchester driver in a letter to the *Commercial Motor* in 1908:

I myself have to be at the shed to light the fire, and get steam up, at 3 and 4 a.m., and it is 8 p.m., and has even been as late as 12 and 1.30, before I have done my day's work. I have complained till I am tired, and am about sick of it; can anyone wonder that men get stale and careless?⁹⁶

This account is an example of the extreme pressure put on drivers both by the public and by motoring advocates and commercial motor owners, pressure that was part of the complex relationship between the acceptance of a new technology by residents in towns and beside roads, and by councils, vehicle owners and drivers. One of the ways in which the commercial motor combated opposition was to advocate the benefits of the motor as a "supplementary" technology, rather than a substituting technology. In Manchester the advent of bus services were designed to connect passengers to the tram network, not compete against it.⁹⁷ Similarly commercial haulage could complement intracity horse haulage with intercity potential a position that had long

⁹² *Manchester Guardian* 24/10/1902

⁹³ *Commercial Motor* 17/9/1908

⁹⁴ *Commercial Motor* 24/9/1908

⁹⁵ *Commercial Motor* 17/9/1908

⁹⁶ *Commercial Motor* 4/6/1908 p.21

⁹⁷ Joyce, J., *Roads and Rails of Manchester 1900-1950* (London: Ian Allan, 1982) pp.68-69

been advocated by the LSPTA. Commentators such as the writer of the *Manchester Guardian* article “Steam Motor Haulage in 1905” argued that:

distances of thirty to fifty miles would be the ideal daily performance...For short journeys... the horse is undoubtedly the more economical.⁹⁸

Where motors did advertise as a replacement for horse-drawn vehicles during this early period they were often in areas where there was a social benefit. This included doctors’ cars, fire engines and postal services.

Doctors have been highlighted as a particularly iconic group of early motorists, emphasised in trade literature.⁹⁹ For example, Marshall and Co., an early Manchester manufacturer, featured a “Doctors’ Landau” in *The Autocar* in 1897 and letters from doctors frequently appeared in trade magazines such as a letter to the *Automotor and Horseless Vehicle* in 1897 from a country doctor “very anxious indeed to try a motor carriage”.¹⁰⁰ However the extent to which doctors bought automobiles has been shown to be both variable by location and disputed.¹⁰¹ In Essex for example over 1 in 10 registrations in 1904 were for doctors.¹⁰² However in Cheshire, of cars originally registered between 1904 and 1907, only 2 percent of registrations were for individuals involved in the medical profession.¹⁰³ It is possible, as Mom argues, that the functional utilitarian aspects of use were largely an alibi for pleasure and that transforming doctors’ mobility was part of the sociotechnical imaginaries surrounding the automobile used by motor manufacturers to legitimise their product, while the reality was that doctors did not take to motoring in significant numbers.¹⁰⁴ Indeed utility as an alibi seems to be the case for Doctor Tracy, who’s surviving published motoring diary starts by arguing for the economy of motoring on his rounds, before describing his first ride as “thrilling”, and then describing scenes of delight as he presents himself

⁹⁸ *Manchester Guardian* 30/12/1905

⁹⁹ Mom, *Atlantic Automobilism* pp.71-72

¹⁰⁰ *AHVJ* September 1897 p.516

¹⁰¹ Mom, *Atlantic Automobilism* pp.71-72 Highlights the general lack of evidence. But does shows great variety over different countries. For example, Paris 1905, only 1.2 percent of car registrations were for medical doctors, while a study of registrations in Essex for 1904 shows over 10 percent.

¹⁰² Mom, *Atlantic Automobilism* pp.71-72

¹⁰³ Cheshire registrations 1904 – 1907, Horner C. (publication forthcoming, 2019). 84 registered drivers, including medical students and “medical officers” out of 4065 registered drivers. These numbers include second and third owners of cars first registered between 1904 and 1907.

¹⁰⁴ Mom, *Atlantic Automobilism* pp.73

and his car as the first motorist in his Devon village in 1907.¹⁰⁵ Further he wrote to his wife

A motor car enlarges one's acquaintance, one's opportunities spiritual, social, etc., etc., enormously.¹⁰⁶

The car, for Doctor Tracy, was certainly more about status and pleasure.

In the Edwardian period motorised fire engines were becoming more common; Figure 22 shows an early example commissioned in 1902 by the Eccles Fire Brigade. In 1910 Stockport Fire Brigade bought a motor engine. It had a christening ceremony akin to ocean vessels: a bottle of wine was broken against it by a woman and a ribbon was cut on its bonnet; it was named the "Mary Dalziel" and the *Commercial Motor* commented on the enthusiasm of the townspeople and the council men who had "the town's interests at heart".¹⁰⁷ This kind of ceremony was not isolated and similar ceremonies have been recorded around the country, such as Hendon Fire Brigade in 1906, Ryde Fire Brigade in 1908 and East Ham in 1914, where they often involved a christening ceremony and demonstrations of use.¹⁰⁸ The celebration and christening of new engines, as well as ambulances, continued to be important local events into the interwar period. Such an event was described in Burnley in 1937 as a new engine was named after a celebrated local Alderman Boothman.¹⁰⁹ Although described with typical *Commercial Motor* bias the ceremony demonstrates that "upgrading" from the horse-drawn to the motor was not merely viewed as progress of economy and technology. The act of christening a ship was an important part of its launch and was part of bringing good luck against the dangers of the sea, or in battle. Thus, the purchase and arrival of a new fire engine was important for the local community, and the ceremony was to bring the fire engine luck in tackling the dangers of fire. They

¹⁰⁵ Tracy, H., *Father's First Car* (London: Routledge and Kegan Paul, 1966) pp.9-13

¹⁰⁶ Trace, *Father's First Car* p.16

¹⁰⁷ *Commercial Motor* 13/1/1910

¹⁰⁸ *Sheffield Evening Telegraph* 2/10/1906; *Commercial Motor* 18/6/1914

¹⁰⁹ *Burnley Express* 13/10/1937

were given a familiar name or one which provides reassurance such as “The Alert”, the name of the Hendon engine or “Gem” an engine christened on the Isle of Wight.¹¹⁰

Unlike haulage vehicles, which passed through urban areas disturbing residents, the fire-engine served the local community and is perhaps one of the few clear realisations of the sociotechnical imaginaries that surround early automobilism. Although there are no statistics for fire-engines, there are many instances of Fire Brigades becoming partly and fully motorised between 1910 and 1914; this included London County Council’s stations in 1911.¹¹¹ The appeal of upgrading was due to social and political pressure. At a christening ceremony on the Isle of Wight the mayor of Ryde reasoned that he:

was glad to know that everything in connection with the engine was of the latest pattern... the Fire Brigade would rise to the occasion and prove themselves to be smart, up-to-date... take part in competitions, and bring laurels to that town of Ryde.¹¹²

The pressure here had several aspects. Politically, points were scored for keeping and advertising a modern “up-to-date” fire service, which the motor engine represented; thus, local politicians were seen to be actively looking after their constituents. There was also the pressures of local rivalries; turning up to a regional Fire Brigade competition in a new motorised engine brought prestige, which in turn put pressure on other local services to motorise. This pressure is alluded to in a report of a similar event in Ruthin, Wales. At the christening ceremony there were three fire brigades in attendance: Mold Fire Brigade had previously brought a motor fire-engine, Ruthin had just purchased one and Rhuddlan Fire Brigade were without. Ruthin had bought the same machine as Mold, and it was also said that Rhuddlan would in turn be having a naming ceremony soon. Throughout the article reference was made to the steam engine produced by Shand, Mason and Co. having “set the fashion in the fire engine world having been supplied to the leading fire brigades” including London with 58 engines and many other urban brigades.¹¹³ This indicates pressure that was national as well as regional. The Ruthin Fire Brigade were too poor to attend the Fire Brigade

¹¹⁰ *Isle of Wight County Press* 10/10/1908

¹¹¹ *Commercial Motor* 18/5/1911

¹¹² *Isle of Wight County Press* 10/10/1908

¹¹³ *Denbighshire Free Press* 27/10/1906

Union of North Wales annual inspection of 1906, and the fire engine had not yet been fully paid for at the naming ceremony, yet they had endeavoured to get the engine.¹¹⁴ This was technological innovation driven not by economic competition, but by social and regional competition or emulation. In this we see how the utopian imaginaries of automobilism transforming society could affect general public opinion and reduce resistance. The actual technological impact of the early motorised fire-engines is hard to judge; although it took several minutes to “get up steam” before it could set-off for a fire, the reality of technological performance was not as important as the social and political acceptance of the imaginary which can help us explain the emergence of the automobile.



Figure 22 - A fire engine produced by the Protector Lamp Company for the local Eccles Fire Brigade – 1902 – Photograph by R. Espley, formally owned by the Protector Lamp Company, now in private collection

¹¹⁴ *Denbighshire Free Press* 27/10/1906

The environment was also important. The North-West's was notorious for poor and difficult roads, the *Commercial Motor* noting that:

Lancashire cobbles, which constitute the hardest school in England and the city which, in all probability, has evolved more tried machines—not to say men—than any.¹¹⁵

A journalist for the *Motorcar Journal* reported on a trip with the Road Carrying Company that:

The road is nothing short of a crying disgrace, which would not be tolerated in the south.¹¹⁶

Similarly, on the ACGB&I Thousand Mile Trial in 1900 the roads towards Preston were noted as being particularly tortuous for the automobiles. Despite the notoriety and inadequacy of the North-West's roads, experiments and use persisted.

Commercial vehicle manufacturing

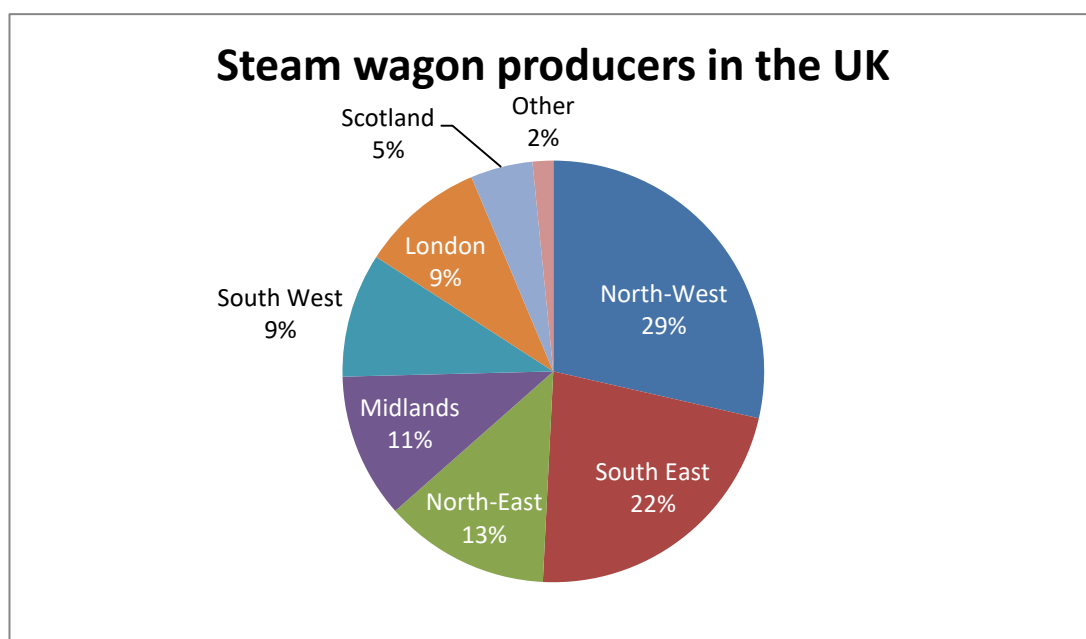


Figure 23 - Source of firms from R. H. Clark, *The Development of the English Steam Wagon* (Norwich: Goose and Son, 1962) and various motoring journals including the *Commercial Motor*.

¹¹⁵ *Commercial Motor* 13/4/1905

¹¹⁶ *Motorcar Journal* 17/1/1903 p.885

It was suggested above that the trials of the LSPTA helped shape the direction of technical innovation and that the group helped bring commercial haulage to the nation's attention. There were numerous commercial vehicle manufacturers in the North-West, and more steam waggon producers than in any other part of the country, as shown in Figure 23. The Lancashire Steam Motor Company (LSMC), Coulthard and Foden were particularly successful in the early years. Financial support for commercial vehicle manufacturers was also particularly strong during the experimental period up to 1905, contrary to Harrison's findings that only £103,000 publicly floated in four years from 1901 to 1904 in the motor car and motor cycle sector.¹¹⁷ For example, Simpson and Bodman were formed in 1896 with substantial financial backing from the textile industry. Foden also managed to gain significant financial support in their £100,000 flotation in 1902, for which over half was subscribed following the success of a prototype in the 1901 War Office trials.¹¹⁸ This flotation alone nearly equals the entire investment in the motorcar and motorcycle sector between 1901 and 1904. While this investment was not particularly large, it came in a period when there was little public investment in the motor industry following the failure of the initial overly optimistic promotions in the late nineteenth century. Similarly, production figures were relatively modest, due to the cost and dubious economy of heavy commercial motoring. Figure 24 shows Foden's production figures over 8 years with a modest rise from a handful of vehicles in 1904 to 200 by 1911.

¹¹⁷ Harrison, "Joint-Stock Company Flotation" p.167

¹¹⁸ Kennett, P., *The Foden Story* (Cambridge: Patrick Stephens, 1978) p.47

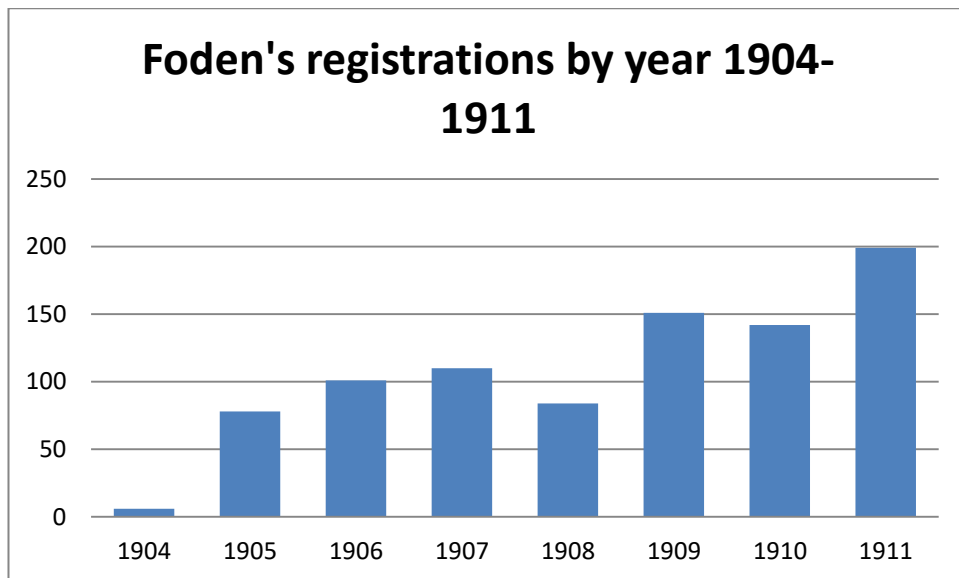


Figure 24 - Data taken from Cheshire motor vehicle registrations, Horner (forthcoming publication, 2019) Foden's registered all vehicles sold in Cheshire.

The pre-eminence of steam power in the North-West is noted by a correspondent of the *Manchester Guardian* in 1906:

Most of the Lancashire experience so far has been gained with steam motor-lurries.... The preponderance of steam lurries over petrol lurries in Lancashire may be partly due to the fact that Lancashire engineering firms are more conversant with steam-engine practice.¹¹⁹

Explaining this is difficult although many of the North-West's commercial vehicle manufacturers had a background in steam engineering. The rail operator and locomotive builder the Lancashire and Yorkshire Railway Co. and the steam locomotive manufacturer Beyer, Peacock and Co. both produced steam-powered commercial vehicles shortly after the turn of the century. Similarly, North-Western manufacturers Simpson and Bodman, the LSMC, Walker Brothers and Foden all had a background in steam engineering. Only a few firms produced petrol-powered commercial vehicles before 1907. These were mainly motor car manufacturers who sold petrol powered chassis for commercial purposes, like the Belsize Motor Company or the Protector

¹¹⁹ *Manchester Guardian* 8/8/1906

Lamp Company. This relationship with steam continued for some time to come. For example, Foden continued to produce steam lorries into the 1930s.¹²⁰

The propensity for steam in the North-West is reflected in Figure 23. In comparison the North-West had only one electric manufacturing firm, the short-lived Lancashire Electric Vehicle Company,¹²¹ while London showed a much more diverse picture. For example, electric taxis and buses were in evidence for much of the period alongside steam.¹²² As Mom has demonstrated in his analysis of the electric vehicle, the decision over propulsion type was more complicated than one of a superior technology replacing another, less efficient technology.¹²³ The regional variety of propulsion type demonstrates both the backgrounds of the industries in the North-West, but also the topography of Lancashire, which was much more challenging than that encountered in London, for example. It also reflects Lancashire's long relationship with steam power in the textile industry, with cheap coal readily available from large local mining operations.¹²⁴

There is also an appreciable difference in the home market between commercial and private vehicles. The UK market for private vehicles featured several foreign imports such as Panhard, Renault and Ford. On the other hand, commercial vehicles saw poor penetration for foreign imports. Even Ford before 1914 only produced a few commercial vehicles.¹²⁵ Explaining this difference is difficult due to the lack of research in commercial vehicles. However, it is likely that initially the UK was making particular technological progress in commercial motoring, through the preoccupation of groups like the LSPTA and early manufacturers such as Simpson and Bodman, the Lancashire Steam Motor Company and Foden. This is borne out on the rare occasion in which foreign and British manufacturers competed. For example, in the 1907 Commercial Vehicle Trials there were 38 British vehicles, of which 1 retired; and 19 foreign vehicles, of which 5 retired, while British entries scored consistently higher in stoppages and in

¹²⁰ Kennett, *The Foden Story*, p.109

¹²¹ *Autocar* 11/6/1898

¹²² G. Mom, *The Electric Vehicle* pp.182-183

¹²³ Mom, *The Electric Vehicle*, p.6

¹²⁴ Farnie, *The English Cotton Industry*, p.53

¹²⁵ Riley, Lilleker and Tuckett, *The English Model T Ford* p.76

timing and manoeuvring.¹²⁶ Henry Sturmev reporting on the trial, while obviously biased, concluded that:

“The result which, perhaps, looms out above all others has been the marked superiority, all along the line, shown by the products of British factories over those of their Foreign competitors.”¹²⁷

Whatever the case, consumers certainly preferred British vehicles. Cheshire registrations from 1904-1911 show no heavy vehicles registered from foreign manufacturers; as we have already seen there was also preference for local manufacture during this period. The significance of this is that it complicates the view that the British motor industry was “lagging” behind foreign competition. Certainly in commercial use this was not the case. We see in this the importance of catering for a national or regional market and the influence of specific national characteristics, highlighted as important by Mom.¹²⁸ Lancashire-or Cheshire-made commercial steam vehicles were purposely made to cope with both the particularly bad roads and steep gradients that characterised the area. Similarly manufacturers catered for specific British legislation such as tare limits, and finally with reliability perhaps more important in the commercial sphere, access to the manufacturer was particularly important and there was an emphasis, as seen in the case of Foden, on after sale servicing.

The number of North-Western commercial vehicle manufacturers demonstrates both the influence of the LSPTA and the varied needs and interests in the region. Early commercial vehicle manufacturing and usage in the North-West is notable for the variety of interest groups. There were pleasure motor manufacturers such as the Protector Lamp Company making vans, light cars and fire engines; likewise, Marshall and Co. produced light cars, tricycles and postal vans. We have also seen how haulage firms such as the Road Carrying Company and the Manchester Motor Transport Company were both taking on haulage contracts and acting as agents for private

¹²⁶ *Commercial Motor* 31/10/1907 pp.106-108

¹²⁷ *Commercial Motor* 31/10/1907 pp.106-108

¹²⁸ Mom, *Atlantic Automobilmism* p.313

motor cars. Simpson and Bodman show textile manufacturing support, while firms such as the Lancashire and Yorkshire Railway company show railway enthusiasm for commercial motoring. The eclectic nature of commercial motor manufacture during this early period demonstrates the difficulty of separating commercial and pleasure motoring interests. Even behind specialist commercial vehicle firms we see private motoring interests. For example, the Foden family were keen motorists and members of the Manchester Automobile Club.¹²⁹ Dan Simpson, commercial vehicle manufacturer, was a racing cyclist and motor cyclist, also a member of the Manchester Automobile Club.¹³⁰ Finally George Pilkington Dawson, the Managing Director of Beyer, Peacock and Co. who oversaw the firm's entry into the industry, was also a member of the Manchester Automobile Club and later a director and investor in the Belsize Motor Company. This is like the examination of members of the LSPTA who also showed varied interests and backgrounds, the club being run simultaneously as a social motoring society and a commercial vehicle lobbyist and promoter.

Conclusion

By the Edwardian period commercial motoring had started to become a viable form of transport for business purposes. Commercial motor vehicles became more familiar to the non-motoring public, although this familiarity was not necessarily a positive thing, with the danger and disruption caused by large motor vehicles in urban areas mirroring that experienced by rural residents from private motorists.

Commercial motoring has received little attention in scholarship, in what is generally seen as a secondary stream of automobilism. However, there is clearly merit in its exploration. We have highlighted that although commercial motoring and manufacturing was growing, it was a much steadier growth than that seen in other areas of automobilism. This analysis has exposed a new dynamic to our understanding of the economy of the North-West: associating entrepreneurship and the willingness to invest in new industries, with larger and established ones can contribute towards

¹²⁹ Edwin Foden registered a Locomobile steam car in 1905 and a Stanley Steam car in 1906 – Cheshire registrations, Horner (forthcoming publication, 2019)

¹³⁰ Simpson took part in the first motor cycle race in Manchester at the Fallowfield Track in 1899 reported in *Autocar* 26/8/1899 p.755

debate over the stagnation, and interwar decline of the North-West's cotton trade.¹³¹ The early recognition of the potential of the commercial vehicle and the experimentation and adoption of motor haulage by textile manufacturers can be seen as an example of management adapting to a new technology that could increase competitive advantage and thus be used to counter the argument made by scholars such as Mass and Lazonick that there was a failure to adapt to technological advances.¹³²

Similarly, exploration of commercial motoring has shown how varied the diffusion of the automobile was during this period. This is particularly apparent when compared to the much more rapid diffusion of the motorised taxi. We will see in the next chapter how this affected the adaptation of coachbuilders, some of which served upper-class clients, while others such as wheelwrights and cartbuilders served the horse-drawn commercial trade. This latter trade saw an increase in employment between 1901 and 1911, and thus the emergence of the automobile had little effect until after the First World War.

¹³¹ Investment in experimental commercial motoring, can be seen as evidence of Lancashire's embrace of new technologies, engaging with debate over Lancashire's industrial decline including Sandberg, *Lancashire in Decline*; Lazonick, W. and Mass, W. "The Performance of the British Cotton Industry, 1870-1913", *Research in Economic History*, Vol. 9 (1984) pp.220-2; Marrison, A., "Indian Summer" in M. B. Rose ed., *The Lancashire Cotton Industry* Lancashire (County Books: Preston, 1996) pp.238-264

¹³² Mass, W. and Lazonick, W., "The British Cotton Industry and International Competitive Advantage: The State of the Debates" in *Business History*, Vol.32:3 (1990) pp.37-57

2.4 - Replacing technologies: the horse and the commercial motor boom

There are very few studies of the transition of technology between the horse and motor vehicle. As we suggested in the chapter introduction this is probably because economic and automobile studies have assumed that the disappearance of the horse was simply technologically determined, and thus easy to explain. One of the few studies to explore the decline of the horse, focusing on the urban environment in the USA, has been conducted by Tarr and McShane.¹³³ They explore the myriad of uses that horse-drawn transport performed and argue that

When owners perceived horses as obsolescent and unable to compete first with electric streets cars and then with the new motor trucks and motor cars, they disappeared with astonishing rapidity except for some specialized niche areas. In the final analysis, these living machines were most valued as technology.¹³⁴

Despite evidence of early uses, as we have also documented above, they argue that the widespread change came about from 1917 due to the development of the light commercial Model T and the more advanced development of heavy trucks, particularly the “Liberty” truck, until by 1930 there were almost no horses used for freight transport.¹³⁵ This change was not as pronounced in the urban environment in the UK, as we shall see, although there was a very similar boom in the use of light commercial vehicles. Tarr and McShane provide an excellent empirical study of the decline of the horse, yet they also take a technological determinist approach, arguing that horses were viewed by business owners as “mostly machines”, and therefore that decisions for substituting technology were economical. This is convincingly argued and backed up with a range of evidence from the nineteenth and early twentieth centuries from both the USA and Great Britain. This is an argument shared by Turvey, who argued in analysis of horse use in Victorian London that “to most owners... horses were simply depreciable capital goods.”¹³⁶ Despite this Tarr and McShane fail to analysis the non-economic factors in technological change. We will argue in our analysis of the interwar period in the North-West that the ideals of “modernity” and “progress” provided a pull

¹³³ McShane and Tarr, “The Decline of the Urban Horse in American Cities”

¹³⁴ Tarr and McShane, “The Horse as an Urban Technology” p.15

¹³⁵ McShane and Tarr, “The Decline of the Urban Horse in American Cities” p.192

¹³⁶ Turvey, “Horse traction in Victorian London” p.38

towards the motor vehicle and images of backwardness and old technology pushed businesses away from the horse. These pressures can be seen in a 1914 Ford advertising campaign in Figure 25 where the horse is compared to a bow and arrow and the automobile to a machine gun, the implication being that if you do not get an automobile you will be left behind. In the replacement of horse-drawn technology we see not just a technologically determined economy but the importance of social pressures and sociotechnical imaginaries which have underlined the emergence of the commercial vehicle in the early period of study.

Ford
THE UNIVERSAL CAR

THE tradesman who competes with horse cart and hand barrow against a tradesman equipped with a Ford motor delivery van is fighting a machine gun with a bow and arrow. The service of several horses is in every Ford van, yet the Ford costs less to run than one horse.

Prices (at Works, Manchester), Light Canvas-covered Delivery Van, with low tail board and rear curtains, £115. Steel panelled box van, double rear doors, £120. Commercial Runabout, with large detachable metal sample case, £130. All efficiently equipped. Apply to—

WHIPPLE'S GARAGE,
High Street, Grantham.
TEL. 102. WIRES, "WHIPPLE'S GARAGE."

Figure 25 - *The Grantham Journal* 24/10/1914

The horse and cart versus the commercial motor: Horse power vs brake horse power

From 1918 there was a boom in commercial motoring which is highlighted through road surveys and national statistical analysis. Employment statistics from the 1921 census recorded just over 50 percent of road transport workers were employed on motor vehicles:

proportion of horse drivers (718,719) to motor drivers (720,721) is highest in the large towns and lowest in the rural districts.¹³⁷

This marks a fundamental difference from the census of 1911, which showed that 11 percent of road employment was in the motorised category, and demonstrates the general boom in commercial motoring after the First World War.¹³⁸ Not only was there a rise in motor transport and a decline in horse-drawn, but generally there was a remarkable increase in road traffic. This boom is recognised in national and regional road surveys. A road census in Lancashire in 1922 showed a fourfold increase in tonnage on the roads compared to 1911, and the average speed had doubled.¹³⁹ While a fourfold increase was an average, the census also showed some key areas of growth. At Sankey Street on the Manchester-Liverpool road the census showed a sevenfold increase in tons per day from 1,167 in 1911 to 8,250 in 1922.¹⁴⁰ At this same point motorised transport had risen from 26 percent in 1911 to 98 percent in 1922.¹⁴¹ These statistics suggest that the horse and cart was becoming obsolete on Britain's roads early in the interwar period. This is supported when we look at other snapshot statistics. In the 1922 traffic census the Preston and Blackpool road saw daily 9,048 tons of mechanical vehicles and only 71.2 tons horse-drawn. Nationally the statistics from 1922 show that at 221 points in the country 93.6 percent of transport was mechanically propelled and 6.4 percent was horse-drawn, and overall there was a threefold increase in traffic measured at these points since 1911.¹⁴² What is striking about this is the conflict with the employment census data which shows an almost equal parity of employment between horses and motor vehicles. Some of this difference can be accounted for in the rising popularity of private motoring, however not all. Horse-drawn transport showed a remarkable persistence even towards the end of the interwar period. The data shows that the horse and cart had all but disappeared from the main roads of Britain, yet the data does not show how successful and preferred horse transport was in the urban commercial environment. Evidence from

¹³⁷ Anonymous, *Census of England and Wales 1921: General Report with Appendices* (London: His Majesty's Stationery Office, 1927) pp.93-117

¹³⁸ Anonymous, 1917, *Census of England and Wales 1911: General Report with Appendices* (London: His Majesty's Stationery Office) pp.110-112

¹³⁹ *Commercial Motor* 14/11/1922

¹⁴⁰ Fenelon, K. G., *The Economics of Road Transport* (London: George Allen and Unwin, 1925) p.36

¹⁴¹ *Ibid.* p.36

¹⁴² *Commercial Motor* 14/11/1922

both Manchester and Liverpool shows how the motor vehicle failed to gain superiority to the horse in certain areas of use. This was often caused by congestion and the narrowness of British city streets, which was not such a factor in the USA.

Manchester and Liverpool – horses for courses

Data for transport at the Liverpool Docks in 1921 showed that horses still had the upper hand with 52.4 percent horse traffic and 47.6 percent motorised.¹⁴³ The persistence of the horse in these urban and congested areas was the source of much grief amongst the writers of the *Commercial Motor*. This was illustrated in an article in 1927 which vehemently attacked horse-drawn vehicles in Liverpool, suggesting

[the] horsed vehicle be barred altogether from those thoroughfares where it at present impedes other traffic... How often one sees slow-moving units occupying far more than their rightful share of the road, followed by quite a queue of motors!¹⁴⁴

The article suggested that horse users should be compensated and a switch to motor vehicles be made compulsory. This action was similar to that advocated by motor advocate Lord Montagu of Beaulieu who argued that:

Everywhere horse-drawn carts and vehicles block the faster traffic...increases the dangers of the streets to pedestrians and road users...If horse-drawn vehicles could be forbidden in certain crowded thoroughfares between 10am and 6pm, what immediate relief there would be!¹⁴⁵

This motoring bias reflects the strength of belief in the sociotechnical imaginary that the speed of motor vehicles would benefit society if only it could be realised, in this case by the removal of horses. However, there was reaction against this attack on the horse-drawn vehicle, even from those heavily invested in the promotion and use of the motorised commercial vehicle. For example, Mr R. W. G. Barnett, ex-president of the Commercial Motor Users' Association (CMUA) and director of the Liverpool Cartage Company was one of many respondents who owned both a fleet of motors and a stable of 150 horses. He argued that the horse was still noticeably more economical in the city centre. He uses the example of a £1,000 motor, with a mandatory 3-man

¹⁴³ *Commercial Motor* 13/12/1921

¹⁴⁴ *Commercial Motor* 11/1/1927

¹⁴⁵ Montagu letter to *The Times* in Fenelon, *The Economics of Road Transport* pp.125-126

complement compared to a £250 two-horse wagon with just one driver.¹⁴⁶ Another local expert was also interviewed and argued that replacing horses with motors would not change the traffic problem which he viewed as a “utopian” fantasy, challenging the imaginary view of the benefits of motor only streets, arguing that:

Congestion would not be abolished by the abolition of the horse; neither would terminal delays at the docks, factories and warehouses be eliminated.¹⁴⁷

The situation was similar in Manchester. The traffic on the outskirts and in the centre of Manchester was notoriously bad. In an interview with the *Commercial Motor* a driver of a petrol lorry noted that:

he could run a full load of raw cotton from the docks at Liverpool to the outskirts at Manchester in well under four hours. It took him an hour to run the last three miles through Manchester.¹⁴⁸

This problem meant that even in the interwar period the horse was often as economical, if not more so, than the motorised commercial vehicle for short distance urban haulage. Similarly at the Shudehill Market in the centre of Manchester a 1929 traffic report, commissioned due to excessive congestion, noted the nature of market traffic as being an eclectic mix of motorised transport, mainly comprised of through-traffic, customer vehicles and farmers transport; horse-drawn carts mainly used by railway deliveries for perishable goods; and hand carts used by the market to transport goods to the customers’ vehicles.¹⁴⁹ This is typified in a few other case studies that reveal a symbiotic relationship between the automobile and the horse, rather than an antagonistic one.

The symbiotic use of horse and motor vehicle

For many haulage firms in the North-West, improving commercial vehicle technology was welcome, not necessarily as a replacement for the horse and cart, but as an opportunity to provide longer distance and faster deliveries whilst still being able to

¹⁴⁶ *Commercial Motor* 25/1/1927

¹⁴⁷ Ibid.

¹⁴⁸ *Commercial Motor* 22/1/1924

¹⁴⁹ Manchester Central Library Archives, *Special Committee Minute Book* Vol.12, 18/10/1929 - GB127.Council Minutes/Special Committee/11

provide the same short distance services with the horse in congested and narrow city streets. However, the idea of “backwardness” or a failure to “modernise” was a pressure that could overtake economic sense. As we have seen in Chapter 1, the purchase of a Ford by a small businessman could make it difficult for him to feed his family. Similarly this pressure could account for the reports that large Liverpool-based haulage firms were looking in the late 1920s to increase the size of their stable after the experience of years of motor vehicle use had given them a more considered perspective.¹⁵⁰

Examples of a symbiotic relationship can be seen if we look at a few regional businesses. The Manchester Corporation’s cleansing department used both horses and motor vehicles for its varied operations: the yearly budget for 1934 exposes the continuing importance of horses, with £79,852 allocated for horse transport and £32,496 for motor transport.¹⁵¹ The Manchester and District Co-operative Laundries Association had four large laundries that provided services throughout Manchester, its suburbs and surrounding towns. The Co-operative washed over ten million items of clothing in a half year in 1927. Each laundry had its own fleet of vehicles, totalling 23 motorised vans and 48 horse-drawn vans. These vehicles worked together as follows:

motors working the districts... relieve the horsed vans of their loads, thus saving travelling time to and from the works. This means that a horsed van might leave the laundry first thing in the morning and not return until the finish of the day’s work, and yet be kept clear of accumulated loads.¹⁵²

The Co-operative laundry had been using motorised vehicles before 1914, but the horse was more economical for the stopping and starting experienced with localised pickup and delivery jobs. This was particularly the case for this laundry service which dealt with families’ washing, thus the horse vans would need to do at least 1,000 successful collections and deliveries a week to turn a profit. However, the intelligence of the horse was also given as a reason for their superiority by the Managing Director of the firm:

¹⁵⁰ *Commercial Motor* 25/1/1927

¹⁵¹ *Commercial Motor* 24/2/1933

¹⁵² *Commercial Motor* 29/11/1927

while the driver is collecting at one house, the horse takes the van along to the next customer's address, and waits until the driver has deposited his collection... the driver need not trouble about his van – the horse sees to that.¹⁵³

The horses' intelligence has also been used to explain the persistence of the horse for certain specialised work in America.¹⁵⁴ The *Commercial Motor* also describes a firm which specialised in cotton haulage, which created specialist depots just outside Manchester which were used to convey loads from motor vehicles to horse-drawn vehicles and vice versa for the journey to outlying mills and to the city's warehouses.¹⁵⁵ Where the roads were wide enough in Manchester, such as can be seen on Deansgate in Figure 26 in 1924, we see both how widespread the use of the horse for commercial vehicles still was and how traffic was organised into a neat three-lane system, to accommodate the large amount of horse-drawn commercial traffic, the faster motorised taxis and private vehicles and the city's trams. It is unclear whether this was organic, or organised and enforced by the local police, seen in the middle of the crossroad. Horses also still featured in corporation road-building activities as late as 1939: the Eccles Corporation introduced automatic traffic signals on the humpback bridge over the Bridgewater canal on the Liverpool-Manchester Road which "will not subject horses to the severe strain of holding and restarting heavily loaded wagons on the steep inclines."¹⁵⁶ And it was not until well into the 1950s when horses disappeared completely from the city centre of Manchester. The last corporation refuse horse and cart was retired in 1951.¹⁵⁷

¹⁵³ *Commercial Motor* 29/11/1927

¹⁵⁴ Tarr and McShane, "The Horse as an Urban Technology" p.15

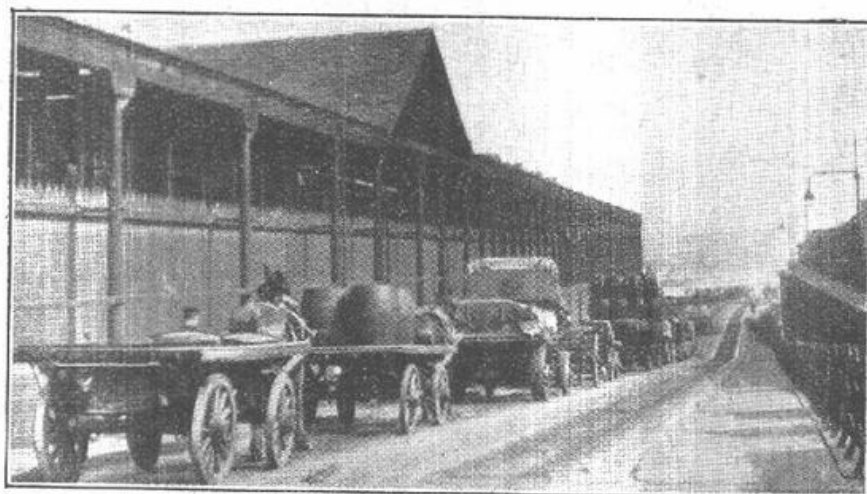
¹⁵⁵ Ibid.

¹⁵⁶ *Manchester Guardian* 23/3/1939

¹⁵⁷ Manchester Local Image Collection – m60465



Figure 26 – Deansgate, Manchester 1924 – Manchester Local Image Collection - m81203



Why transport costs are heavy. A line of slow-moving traffic, with motors sandwiched between horsed vehicles, descending the floating bridge, Birkenhead. When the tide is low horses have a stiff climb.

Figure 27 - Liverpool traffic 1927- *Commercial Motor* 25/1/1927

The sustained presence of the horse in the urban environment is not only a curiosity but is of significance for our understanding of traffic interest groups, the development of the urban haulage economy, and our understanding of technological substitution. As we have seen in Figure 25 and in some of the columns in the *Commercial Motor*, the horse and cart were targeted by motor manufacturers and motoring advocates as backward, even archaic relics of the previous century. Indeed the following from the *Commercial Motor* of 1926 contrasts the “conservatism” of the old with the ambition of the young, linking business and marital success to motor ownership:

The tradesman has constituted the most conservative section of its community, and has been slow to follow the example of manufacturers and distributors in the use of motor vehicles...Nowadays, the possession of a car is the earliest ambition of the youth who is progressing at business and is contemplating marriage.¹⁵⁸

This emphasis on entrepreneurialism, motoring and youth tallies with the increasing prevalence of motoring in the youth culture of this era.¹⁵⁹ However, as an experienced haulier observed, the view that if mechanical transport were to completely replace horse-drawn transport we would see speedy, non-congested city centres was an unrealistic “utopian” vision. In reality the speed with which commercial motoring was adopted in the interwar period caused a number of acute problems, especially for urban traffic with pollution, congestion, noise and an increased risk to the pedestrian.

Utopian and progressive sociotechnical imaginaries surrounding the automobile continued to be pushed during the interwar period by motoring advocates; these imaginaries no longer revolved around replacing the horse, but instead involved the railway. Figure 28 is a campaign cartoon from the *Commercial Motor* protesting against licensing of commercial vehicles which motoring groups viewed as unfairly advantaging the railway, leaving the commercial motoring “legislation bog” on the course to increasing “prosperity”. A similar struggle was happening in America where in the face of railway-led “anti-road propaganda”, the Nation Highway User’s Conference

¹⁵⁸ *Commercial Motor* 16/11/1926

¹⁵⁹ Mom, *Atlantic Automobility* p. 174; 519

requests the President to bear in mind that road transport is a step in the march of progress. It is definitely bad policy to invent restrictions for the benefit of the railways.¹⁶⁰

Legislative bias towards the railways during this period has been identified.¹⁶¹ However, the arguments for freedom of technological progress and subsequent prosperity provided by the automobile show that the commercial vehicles meaning and diffusion went beyond improved economic competition and technological determinism. We shall see in the next section how these sociotechnical imaginaries also impacted the decisions of city planners and councils as weight grew behind the commercial motor vehicle.



Figure 28 - Cartoon following the Road and Rail Traffic Act 1933- *The Commercial Motor* 12/5/1933

¹⁶⁰ *Commercial Motor* 17/5/1935

¹⁶¹ Plowden, *The motor car and politics* p.195

Conclusion

At the beginning of the chapter we explored the predication of automobile advocates, such as Sir David Salomons, that the horse, used for haulage, would be replaced almost entirely by the automobile within five or ten years of the beginning of the twentieth century. This prediction was right that the automobile would triumph, but it was not until after the Second World War that the presence of the horse became a rare sight on city streets. We have highlighted the horses' persistence as a specialist in the urban environment, still used by large haulage firms, and companies well into the 1930s. We have also, therefore demonstrated how national road statistics could be misleading, with surveys often taking place on the large inter-city roads where the automobile quickly dominated. Scholars who examine the transition between the horse and the automobile, such as Tarr and McShane, Thompson, and Turvey, argue that the substitution was often one of cold economy. Indeed, we have seen in this section how economy was important to the changing of haulage technologies. Yet it was also a battle of technological perception. Automobile advocates targeted the horse as backward, whilst the automobile developed a strong sociotechnical imagining as the future of commercial transport. We shall see how this imagining came to dominate the urban transport debate in the following section, which focuses on congestion in Manchester in the interwar period.

2.5 - Traffic and the city of Manchester: utopian visions and contested streets

This section will explore how the imaginaries and realities of the automobile impacted the city streets. As commercial motor vehicles boomed in use during the interwar period the city centre and the roads surrounding it became increasingly contested and hard to manage spaces, with several different interest groups competing for their own space. Buses replaced the tram system in the 1930s and horses and motor vehicles contested space, while dangers for pedestrians increased. Town planners and councils were in the position where action needed to be taken to deal with traffic on the urban streets. Manchester and surrounding councils commissioned a Joint Town Planning Advisory Committee to explore the issues and find solutions, while the Traffic Congestion Sub-Committee looked specifically at measures to deal with congestion in the city centre. In both these bodies we see a fundamental shift towards automobile interests during this period, through traffic solutions and planning recommendations. In a study of the automobile in American cities, McShane argues that the automobiles' powerful cultural image entranced planners and public officials with utopian visions of the city dominated by the automobile, while the reality was cities were a "socially and politically fragmented, gas-guzzling environmental nightmare," as space became dominated by the automobile.¹⁶² Similar utopian visions were created in the UK. Jeremiah argues that the utopian imaginings of artists like Guy Lipscombe's 1908 "Utopian. 'A thoroughfare of the future'" set the agenda for the interwar period.¹⁶³ The drawing shows a wide urban road segregated with pavements, horse lanes, motor lanes and tram lanes; apart from the wideness of the road the drawing shows the speed with which the central motor traffic was moving and the direction out into the countryside. As we have already highlighted, the segregation or elimination of certain types of traffic, especially horses and trams, was the answer for many motor advocates. For example, F. Fissi's 1913 vision of 1933 London included the city centre without horses or trams hindering the eclectic and relentless motor through-traffic, noticeable also for the lack of commercial motor vehicles.¹⁶⁴

¹⁶² McShane, *Down the asphalt path* pp.202-228

¹⁶³ Jeremiah, *Representations of British motoring* pp.128-129

¹⁶⁴ F. Fissi, "London in 1933, A Shopping Scene Twenty Years Hence", 1913 in Jeremiah, *Representations of British motoring* p.132

These utopian futures are highlighted by motoring advocates like Rees Jeffreys, who argued for motoring-centred road building: he noted in 1907:

it is an absurd state of affairs that road vehicles have now been constructed that can travel conveniently at a mean speed of 30 miles per hour, yet in no wise are they able to maintain this speed in urban or suburban centres.¹⁶⁵

Jeremiah therefore highlights the tension between these motoring advocates and their visions for future highways, and rural preservationists looking to protect the countryside from the modern highway and traffic vision.¹⁶⁶ However, the urban environment had its own, perhaps more complex tensions: between the different road-users and pedestrians, and different business interests; and finally the corporations and managing companies responsible for roads, infrastructure and town planning. The challenge in dealing with the road traffic boom of the interwar period was not only a challenge for the British rural ideal, but for the functionality of the roads in Britain's cities, and visions of the future. By looking at Manchester during the interwar period we can add to the findings of O'Connell and Plowden, who highlight in their work on the motorcar in politics and the development of road safety respectively, the influence of political, social and economic power in the way in which society makes certain technological decisions.¹⁶⁷ O'Connell for example argued that

once car ownership began diffusing amongst the influential professionals and commercial middle-classes there was little chance that an effective opposition to private motoring might arise.¹⁶⁸

This certainly appears to be the case in Manchester as we explore the nature of the traffic problem in the city. The opinions and actions of different interest groups show how different traffic systems and management plans developed over time, in the dynamic and changeable urban and social environment. In many of these difficulties we see how traffic and systems of dealing with this traffic originated in this period or have been reinstituted depending on the prevailing moods or political emphasis. We

¹⁶⁵ R. Jeffreys, "The planning of the roads for the new traffic", *Motor Car Manufacturers' Art Journal*, June 1907 p.158

¹⁶⁶ Jeremiah, *Representations of British motoring* pp.128-139

¹⁶⁷ O'Connell, *The car in British society* p.113-149; Plowden, *The motor car and politics* pp.227-248

¹⁶⁸ O'Connell, *The car in British society* p.143

see this now in the introduction and emphasis on segregated cycle lanes, or the re-introduction and promotion of Manchester's tram network roughly 50 years after its abandonment. After years of motoring imaginaries private motoring in the city centre is now discouraged, while in the 1920s the council actively sought to help the private motorist with issues such as city centre parking.

The problem of road traffic in Manchester and more widely in the counties of Lancashire and Cheshire was often tackled co-operatively by the different corporations and councils of the region. This manifested itself in the Manchester and District Town Planning Advisory Committee and its subsequent *Report upon the Regional Scheme*, published in 1926. This was the first of a series of regional and city town planning reports with others following in 1945, 1951 and 1961 that would attempt to highlight and offer solutions to the problems of the region's traffic, geography and building development. The report highlighted the problems of traffic both in Manchester and in the region's other industrial towns, specifically the inadequacies of the region's road system: poor links to important industrial towns, few orbital roads, and inadequate width of roads, especially through towns. One example given was traffic on the Liverpool-East Lancashire road, which passed through the centre of Warrington, through a thoroughfare only 15ft 4in wide, which can be seen in Figure 29. In this image we can see the volume of motorised commercial and municipal transport on what was one of the most important roads between Liverpool and Manchester, with barely room for two vehicles side by side; the same stretch of road for which traffic had increased 7 times since 1911.¹⁶⁹ The report recognised that the problem of road traffic was particularly acute in this region of the country due to the nature of the manufacturing industries; this was also recognised by the *Commercial Motor*.¹⁷⁰

This regional traffic problem was accentuated by the Manchester Ship Canal. The report noted the lack of road bridges over it, with only four between Warrington and the Docks, a distance of about 17 miles. On top of this these were swing bridges, which caused bottlenecks and long delays. An article in 1929 reported over half a mile of traffic built up in the time it took the Barton road bridge to swing back in place, and

¹⁶⁹ Fenelon, *The Economics of Road Transport* p.36

¹⁷⁰ Manchester and District Joint Town Planning Advisory Committee, *Report upon the Regional Scheme* (Manchester: Henry Blacklock and Co., 1926) p.39

this was worse at meal-times with increased bicycle and foot traffic from Trafford Park workers trying to get home to Eccles for lunch or tea.¹⁷¹ The Barton Bridge had over 1,000 heavy vehicles crossing it every day. Similarly, the port itself was noted as being badly connected by road.

These problems prompted the report's recommendation for new roads and the widening of existing important thoroughfares, the extent of which is highlighted in Figure 30, which shows all the new roads and bypasses recommended to tackle the chronic traffic problem in the region.¹⁷² What is most notable about Figure 30 is the emphasis on better connections, bypasses and orbital roads outside of the city. These proposals totalled 256 miles of new roads and 79 miles of widening roads, mainly in Lancashire and Cheshire.¹⁷³

¹⁷¹ *Manchester Guardian* 24/1/1929

¹⁷² Manchester and District Joint Town Planning Advisory Committee, *Report upon the Regional Scheme* (Manchester: Henry Blacklock and Co., 1926) p.144

¹⁷³ *Ibid.* p.55



Figure 29 - An image of the narrowness of important commercial roads. Source: Manchester and District Joint Town Planning Advisory Committee, *Report upon the Regional Scheme* (Manchester: Henry Blacklock and Co., 1926) p.39

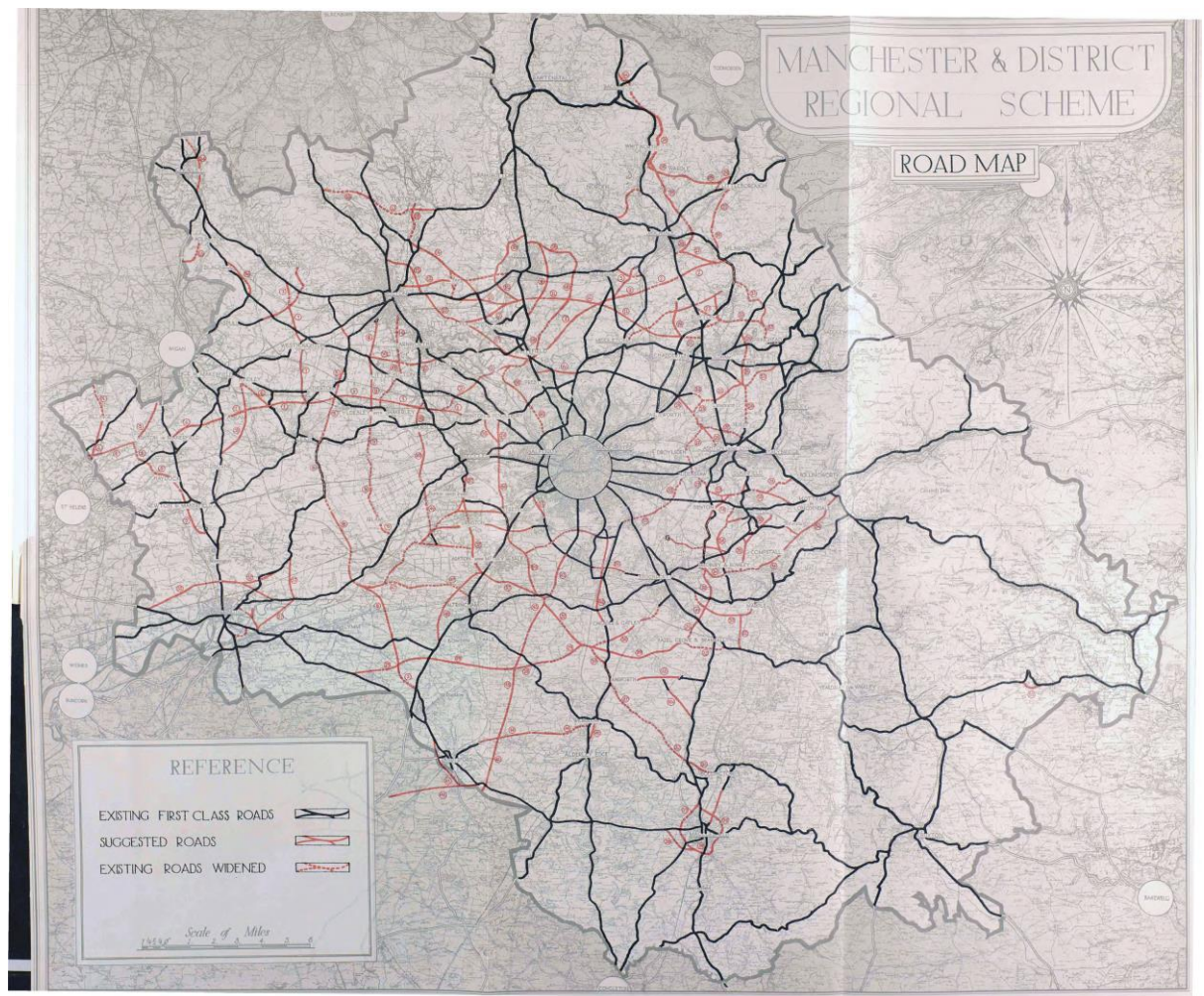


Figure 30 - Map of the proposed new roads and bypasses drawn in red (lighter grey when printed in black and white), against existing roads in black. Source: Manchester and District Joint Town Planning Advisory Committee, *Report upon the Regional Scheme* (Manchester: Henry Blacklock and Co., 1926) p.63

The report also set recommendations for the design and width of roads. For what they called “First-class Roads”, or the major roads, they recommended 100 feet width with buildings set back a further 25 feet on either side. This recommended width was almost ten times as wide as the gap indicated through Warrington.¹⁷⁴ These widths are highlighted in Figure 31 which shows sketches of the widths in question, and roads and footpaths lined with shrubs and trees. These wide green boulevards were never realised, but their imagining shows both the expectations for increasing motor traffic and the vision for segregation of the streets that were often part of the utopian

¹⁷⁴ Manchester and District Joint Town Planning Advisory Committee, *Report upon the Regional Scheme* (Manchester: Henry Blacklock and Co., 1926) p.44

imaginings of the previous decades. The automobile-centric vision continued into the post-Second World War era. The next town plan, the *City of Manchester Plan 1945* argued:

We must have a road network properly designed to serve its essential purpose – the smooth, safe and speedy passage of a vastly expanded volume of motor traffic.¹⁷⁵

In Manchester between 1931 and 1938 725 people were killed on the road and 29,297 injured. The plan argued that

if all these people were Mancunians, then about one in every 1,180 of our citizens was killed and one in every 29 was injured. This slaughter must not go on.¹⁷⁶

A similar segregated, green, wide-boulevard design was recommended as a solution to the pedestrian problem, along with large “parkways” of 400 feet width, including up to 4 lanes of traffic on each side and wide green avenues bordering the roads, reserved in case more lanes needed adding in future.

¹⁷⁵ Nicholas R., *City of Manchester Plan 1945, abridged version* (Jarrold and Sons: Norwich and London: 1945) p.13

¹⁷⁶ Ibid.

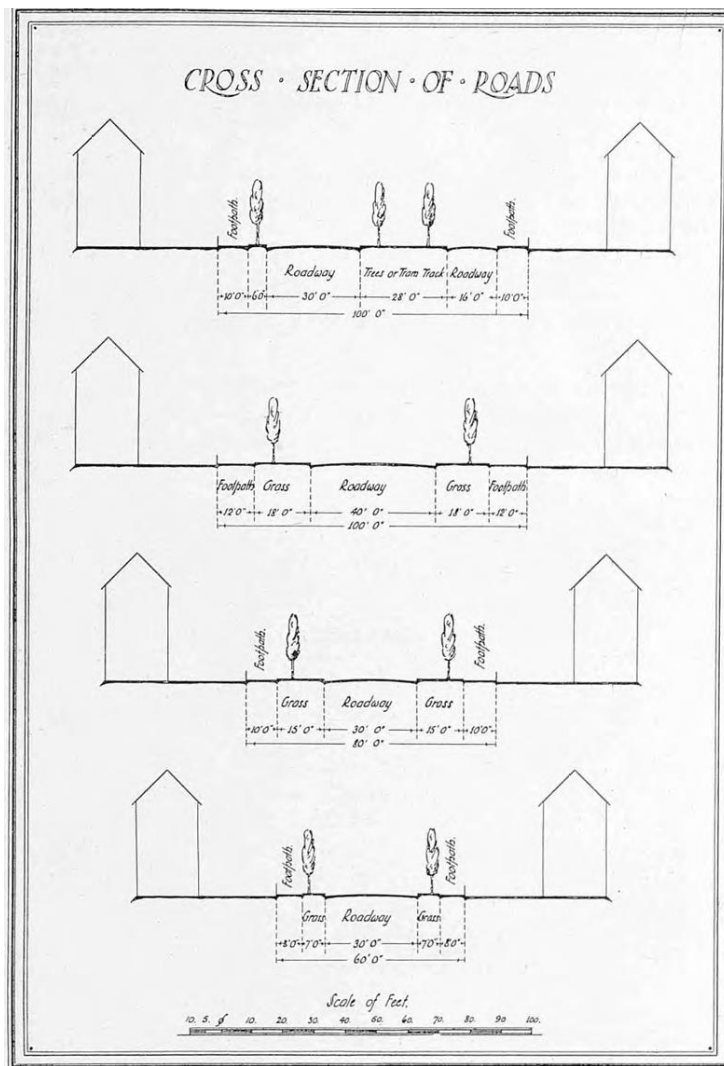


Figure 31 – Recommended road widths. Source: Manchester and District Joint Town Planning Advisory Committee, Report upon the Regional Scheme (Manchester: Henry Blacklock and Co., 1926) p.63

In the city centre the council set up a Traffic Congestion Sub-Committee (TCSC) to periodically deal with the increasing traffic problem through analysis and traffic solutions. The minutes of this committee and the actions of the TCSC, while not necessarily that significant on their own, highlight the changing influence of different traffic interest groups. This is most striking in the conflict between the trams, road users and pedestrians. In the 1920s and in the decade before the First World War tensions were high between tram and motoring interests, with the council and the local police force often choosing between these different areas of interest. A writer to the *Commercial Motor* complained in 1905 that:

some municipal tram committees and managers which, indirectly, have influence and control over the local police, can and will punish the private owner for carrying above the licensed number of passengers, whilst at the same time they order their tram servants to do the very thing they fine others for. This is very notably the case at Manchester.¹⁷⁷

The great influence and power of the Tramways Company in Manchester prior to, and during, the First World War is evident in the TCSC minutes from this period. However, opinions were starting to change in the traffic power struggle in the city centre. Firstly, the makeup of TCSC included a representative from the tramway department but none from any other road user group.¹⁷⁸ At a meeting of the TCSC in 1917 a proposal to restrict tram routes through the principal streets of the city centre was made by the Chief Constable, who believed that they were the main cause of congestion and any other scheme of relief would be ineffectual. Predictably this was rejected by the General Manager of the Tramways who was,

not prepared to discuss any scheme for relief of traffic in the City which does not allow tram cars to run through the principal streets.¹⁷⁹

The belief that trams were the cause of the problem mirrors the view of the *Commercial Motor* and many motoring advocates whose power to influence favourable legislative development was increasing both at a national and local level.¹⁸⁰ A report in the *Commercial Motor* described a typical city centre situation:

Six or eight stationary trams in line, slow-moving horse vehicles between them and the kerb, a swarm of alighting and boarding passengers dodging the horses and, finally, a heterogeneous collection of traffic of all sorts waiting in the rear.¹⁸¹

Horses too were under threat as the Corporation looked at constituting a Transport Department in 1919,

¹⁷⁷ *Commercial Motor* 17/8/1905

¹⁷⁸ Special Committee Minute Book Vol.7 – Meeting of the TCSC on 30/3/1915 – Representatives included those from Finance committee, buildings committee, paving sewerage and highways, tramways and the watch committee.

¹⁷⁹ Special Committee Minute Book Vol.7 – Meeting of the TCSC on 7/2/1917

¹⁸⁰ O'Connell, *The car in British society* p.113

¹⁸¹ *Commercial Motor* 22/1/1924

to control the whole of the vehicular traffic of the Corporation except Tramways, by the substitution of mechanically-propelled vehicles in place of those worked by horses, with the object of preventing the spread of infectious disease, to secure greater economy in working, lessen obstruction to street traffic, and ultimately to apply such a method of working to the whole of the street traffic of the City.¹⁸²

The urgency of the TCSC intensified in the 1920s and meetings, reports and actions became more frequent. It conducted research, surveying traffic usage and seeking information from other urban corporations such as London, Birmingham and Leicester, asking questions of use, economy and efficiency, and attended the road and transport congress in London in 1921.¹⁸³ With the growing traffic problem the council acknowledged the growing “perils of street traffic” and they began to consider the use of one-way systems to minimise congestion and pedestrian risks.¹⁸⁴ The proposed one-way system was shared with both the tramways manager and chief engineer, and the Manchester Committee of Road-Users (MCRU).

R. C. Reynolds, Chairman of the MCRU, argued in 1923 for a more collaborative approach to traffic solutions involving all parties.¹⁸⁵ However, as they became involved in consultation later in the decade, the MCRU endorsed a change, while the tramways opposed and were overruled by the Council. One of the chief points of contention was the passing of trams by motor vehicles at tram stops, often in the middle of the street. The tramways and the council pushed for legislation that restricted passing when tram passengers were on the roadway. This was opposed by motoring organisations such as the CMUA, MCRU, AA and RAC.¹⁸⁶ In Manchester in 1923 there were 43 fatal and 1,396 non-fatal accidents, mostly caused by motor vehicles, and many incidents occurring with pedestrians alighting or entering trams. The chief constable noted:

¹⁸² Special Committee Minute Book Vol.8 – Meeting of the TCSC July 1919

¹⁸³ Ibid.

¹⁸⁴ Special Committee Minute Book Vol.10 – Meeting of the TCSC 23/7/1925; Pooley and Turnbull, *A Mobile Century?* p.88 say the first one-way system in Manchester was introduced in 1936, but TCSC records show the first was introduced in 1928

¹⁸⁵ *Manchester Guardian* 2/8/1923

¹⁸⁶ *Manchester Guardian* 2/8/1923

There were signs of a growing movement on the part of the public, though he admitted the blame was not always on the side of the motorist.¹⁸⁷

The MCRU endorsed the proposed circular one-way system around the city centre and the Chief Constable reported on its success in 1929:

stoppages seriously hampered the business of the City, causing general interference with road transport in the neighbourhood, and resulted in discomfort and danger to pedestrians who of necessity had to thread their way through congested traffic...the adoption of the One-way System has practically eliminated the difficulties described, providing a natural – flow for all north and south bound traffic. The new system has, with the exception of the Piccadilly end of Mosley Street, had the effect of speeding up traffic considerably.¹⁸⁸

The exception was blamed on the build-up of tram traffic, with a restriction of stops proposed. The Chief Constable considered the one-way system a resounding success. Indeed, it would prompt its extension in other parts of the city. Yet accidents increased after the introduction. After 3 months of the new system there were 53 accidents and 23 injuries, while under the old congested two-way system of the same period in 1927 there were 46 accidents and 16 injuries, suggesting the balance of success was skewed towards the better movement of traffic rather than pedestrian safety.¹⁸⁹ The Chief Constable's response was that pedestrians would get used to it, and casualties would reduce. This attitude reflects the general attitude of local and national government identified by O'Connell and Moran, that good sense and education of pedestrians were relied upon more than motoring legislation or systems for road crossing during this period.¹⁹⁰

Further evidence of the increasing influence of motorists and sociotechnical imaginaries on the council and its traffic planning can be seen in a response to complaints from motorists that there was a distinct lack of parking in Manchester, whilst Birmingham had a municipal car park. The Chief Constable was in favour of

¹⁸⁷ *Manchester Guardian* 21/5/1924

¹⁸⁸ Special Committee Minute Book Vol.12 – Meeting of the TCSC 19/3/1929

¹⁸⁹ Special Committee Minute Book Vol.12 – Meeting of the TCSC 19/3/1929

¹⁹⁰ Moran, "Crossing the Road in Britain, 1931-1976" pp.477-481; O'Connell, *The car in British society* p.143

having such a car park in the city centre and proceeded to investigate. It was found that there were 38 garages offering accommodation and 3 garages for private customers with space for 2,660 vehicles, with an average number of motorcars parked on weekdays of 1,248, leaving 1,412 spaces available. Non-use was put down to excessive cost, with few spaces being obtained for under 1s a day, much more expensive than a tram fare which cost as little as 1d.¹⁹¹ While insignificant compared to commercial traffic, taxis and trams, the rising number of private motorists in the urban environment reflects the beginnings of the influence of commuter motorists on the city streets. In Manchester this meant the development of old industrial sites into car parking opportunities. The council for example used an old abandoned gas works as a temporary site for parking in the late 1920s and early 1930s.¹⁹²

As for the tram services, their decline was rapid. In 1929 the Chief Constable made a recommendation for an alternative bus service due to tram problems around Shudehill market, or to exclude trams from particular streets. This was attacked by the tramways general manager, yet the Chief Constable was backed by the Committee, marking a shift from a decade earlier.¹⁹³ This was symptomatic not only of official opinion, but the opinion of prominent Manchester businessmen such as Herbert Whitworth:

Many of my friends visiting home from the East during the past twelve or fifteen months have remarked about the deplorable state of our means of transport when they have seen the congestion of traffic in the main streets. I am not writing from a motorists' point of view but purely as a citizen who is proud of Manchester and anxious for its reputation as a progressive city.¹⁹⁴

Silent in this debate was the voice of the ordinary tram commuter. This idea that the motorcar symbolised modernity, or “progress” has been identified by Pooley and Turnbull as an important interwar paradigm, and the argument that the trams were old-fashioned, and not only blocking the roads, but somehow blocking cultural and economic development was mirrored in other cities such as Glasgow.¹⁹⁵ Throughout this chapter we have explored the pressures created around the meaning of

¹⁹¹ Special Committee Minute Book Vol.12 – Meeting of the TCSC 31/1/1930

¹⁹² Special Committee Minute Book Vol.12 – Meeting of the TCSC 31/1/1930

¹⁹³ Special Committee Minute Book Vol.12 – Meeting of the TCSC 9/12/1929

¹⁹⁴ Special Committee Minute Book Vol.12 – Meeting of the TCSC 31/1/1930

¹⁹⁵ Pooley and Turnbull, *A Mobile Century?* p.84;p.90

“progress” and the automobile, and exploring the changing attitudes of city planners and council leaders also reflects the influence of social and political pressures on the pervasiveness of the automobile and its increasing emphasis in the urban environment.

Manufacturers and adaptation: heavy vehicle systems and developing specialism

Commercial vehicle manufacturers tapped into this idea of “progress” and “modernity” that the automobile represented, looking to promote its use, both through specialist production of vehicles and through the development of different power sources.

Miller and Church identify the trolleybus and the motorbus surge in the 1930s as important for the home market, with take up in urban centres like Manchester increasing considerably to 41 trolleybuses and 224 motorbuses by 1941; both Crossley and Leyland were prominent at developing their public transport manufacturing.¹⁹⁶ This can be seen as a response to the enthusiasm for motoring that was capturing urban corporations. At the same time, firms like Walker Brothers developed specialist systems for Corporation refuse collection - which was essentially a tipper lorry - for bespoke refuse carts used by horses. These proved to be a popular and economic for the hybrid use of horses and motor vehicles by a series of urban corporations both North and South.¹⁹⁷ Walker Brothers also produced a tipping waggon that was particularly narrow:

which was originally designed to meet the requirements of the Liverpool Corporation for a tipping wagon capable of manoeuvring in confined spaces. This chassis has now become so well known, particularly in the colliery and factory districts of the north.¹⁹⁸

Leyland also produced such vehicles especially for use on narrow streets.¹⁹⁹ These problems show a particular urban demand and identify a need on the part of the potential user and manufacturer to solve the “horse problem” in the urban environment. From an economic point of view these examples also highlight how the

¹⁹⁶ Miller and Church, “Motor Manufacturing” p.207-208; Pooley and Turnbull, *A Mobile Century?* p.80

¹⁹⁷ *Commercial Motor* 4/11/1924

¹⁹⁸ *Commercial Motor* 26/4/1921

¹⁹⁹ *Commercial Motor* 14/6/1921

specialist commercial vehicle market could be especially resilient to foreign competition as design was tailored to specific UK urban situations and needs.

The importance of specialist vehicle manufacture for firms like Crossley led them to slowly abandon their private motorcar production. Crossley historians argue that the firm thinly covered a wide market of commercial vehicles and cars to provide a degree of insurance and the car branch was not in deficit.²⁰⁰ We see the lessening importance of private motorcar production in the director's minutes from the late 1930s. The directors keep deferring the decision to commission new projects until eventually the discussion is completely dropped.²⁰¹ Legislative factors also favoured this decision, and the direction of several firms. The War Department, for example, subsidised the construction of commercial vehicles that could be used in the event of war, and thus Crossley continued their relationship with military vehicle production from the First World War to the beginning of the Second when orders began increasing.²⁰²

[Crossley] used its local and political influence to persuade the newly bus-minded City Council to buy from his company, emphasising the need to maintain employment for local people.... Offering to build buses to the precise specification of the Transport Department.²⁰³

This relationship lasted for the rest of the interwar period and in the opinion of Crossley historians ensured the survival of the firm. The "Condor" bus model sold 152 units, including 92 to Manchester and 20 to Rochdale, demonstrating the importance of securing local markets.²⁰⁴ Later "Condors" also showed a local bias, the 1934 "Condor" was distributed as follows: Manchester 89, Rochdale 42, Portsmouth 21, Barrow 11, Northampton 9, Aberdeen 8, Bury 5, Ashton 4, St Helen's 3, Burnley 2, Lancaster 2, Perth 2, Maidstone 2, Widnes 2 and 1 for Birmingham, Leicester, Liverpool, Stockton and Warrington.²⁰⁵ Crossley historians argue that:

²⁰⁰ Eyre, Heaps and Townsin, *Crossley* p.144

²⁰¹ Warwick Modern Record Centre - MSS.226/CR/1/1/1 Crossley Motors Directors Minute Book 1932 - 1938

²⁰² Eyre, Heaps and Townsin, *Crossley* p.80; p.150

²⁰³ Eyre, Heaps and Townsin, *Crossley* pp.119-121

²⁰⁴ Eyre, Heaps and Townsin, *Crossley* p.130

²⁰⁵ Eyre, Heaps and Townsin, *Crossley* p.138

AEC was a much larger firm and its principal customer for buses was London General. In an equivalent way, Manchester Corporation provided both encouragement and substantial orders for Crossley.²⁰⁶

Crossley's bus manufacturing and their relationship with the local councils offers a good example of technological co-construction, which we also see in the development of the diesel bus.

Commercial power: diesel

Today we are seeing a shift from diesel and petrol power to electric in an effort to make the automobile less environmentally harmful. One of the defining technical changes during our period was a shift from steam and petrol propulsion to diesel engines, of which North-West manufacturers and the engineering firm Gardners in particular, were prominent. There has been very little research on this shift, largely due to the general lack of research on commercial vehicles. However, Miller and Church suggest that the adoption of diesel power was linked to cheaper taxation, which by 1935 when the taxation was removed, had resulted in 11,000 vehicles being on the road.²⁰⁷ Diesel also had several technical advantages over petrol, which were particularly relevant to commercial or passenger vehicles, being more economical to run, capable of producing more torque and generally more reliable. Diesel's disadvantages, such as less power and more noise were much more relevant to private motoring.

Diesel gave off fewer fumes than petrol powered vehicles. A Manchester Corporation test in 1932 showed lower carbon monoxide content than petrol and generally less obnoxious fumes from different buses.²⁰⁸ This, and the running costs, was given as the main reason for the preference for diesel vehicles that Manchester Corporation put out from 1933, which in turn stimulated the direction of local manufacturing.²⁰⁹ This might not seem to be much of a consideration in the interwar period, however it was considered to be a significant factor in its favour and it became known by the public as "Yes, this is the bus which runs on heavy oil—you know what I mean, the one that runs

²⁰⁶ Ibid.

²⁰⁷ Miller and Church, "Motor Manufacturing" p.207

²⁰⁸ *Manchester Guardian* 16/8/1932

²⁰⁹ *Manchester Guardian* 11/8/1933

without giving off fumes.”, such was the testimonial of a passenger on a Crossley-Gardner bus.²¹⁰ This was not only a factor for passengers, but for drivers. It was remarked in the *Commercial Motor* that the diesel engine commercial vehicle “can be driven for hours without the dizziness so often occasioned by the fumes of a petrol lorry”.²¹¹ This opinion was echoed by an experienced commercial vehicle driver in Preston, writing to the *Commercial Motor*, who favoured the oil engine for this reason.²¹²

The development of diesel tied in with the theme of progress that the motor vehicle represented and formed part of the rapid replacement of extensive tram systems. For example, the Crossley advert in Figure 32 shows the “old Barrow trams” replaced by new “Crossley petrol and oil double deckers”. The advert also notes how this has happened across the region in Bury, Burnley, Rochdale and Manchester; further comparisons are made with Barrow as an “engineering centre” and this technological modern change that they have adopted. This formed part of the imaginaries of progress that we have already explored as the electric tram was increasingly becoming the target of “modernising” motoring interests as the bus was quickly replacing the tram in many urban centres in the North-West.

²¹⁰ *Commercial Motor* 14/10/1930

²¹¹ *Commercial Motor* 3/5/1932

²¹² *Commercial Motor* 19/8/1930

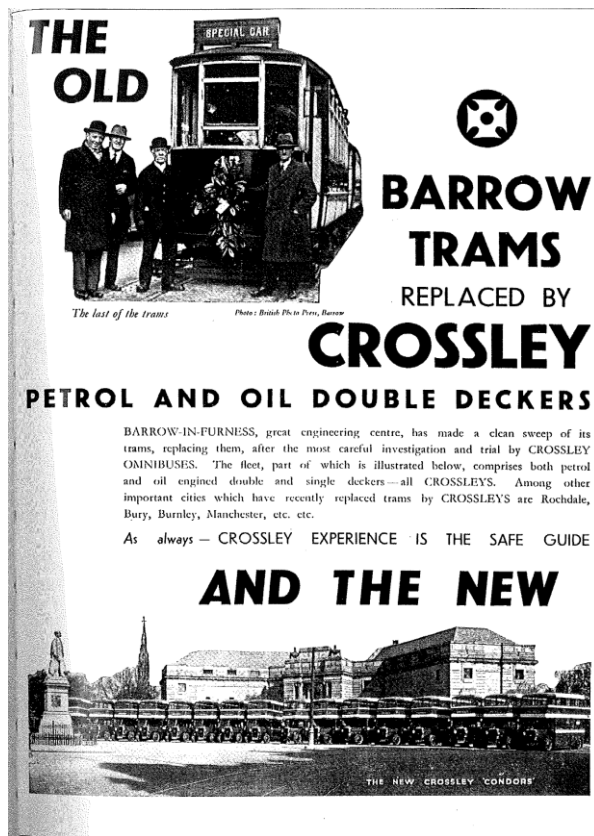


Figure 32 - Crossley advert - *Tramway and Railway World* 9/7/1932

Commercial power: electric

We have already established that horses still had an important role in the 1920s and 1930s on the streets of Britain's industrial cities. The petrol commercial vehicle had failed to completely replace the horse, which had certain advantages in specialist situations that could not be overcome by petrol power. However, from 1930, electric vehicles, which were quiet and easy to stop and start, as well as economical at low speed and short distances marked the end of the horse on Britain's roads. Electric commercial vehicle numbers began to grow steadily during the 1930s before booming after the Second World War.²¹³ Mom highlights this as a striking development, as the UK did not favour the electric vehicle previously; there were for example, only 288 electric vehicles in England in 1914, but over 4,500 by 1938, although this was only a small percentage of the 500,000 estimated commercial vehicles on the road.²¹⁴ In the

²¹³ Mom, *Atlantic Automobilism* pp.268-269

²¹⁴ Mom, *Atlantic Automobilism* p.252;p.269; *Commercial Motor* 19/5/1939

Manchester region there were estimated to be 400 to 500 electrics by 1939, about 10 percent of Britain's electric vehicles.²¹⁵ Why the UK developed an especial interest in the milk float and other short range delivery vehicles is unclear. Mom suggests legislation that prohibited the engine from running while the driver was not in the vehicle was a factor.²¹⁶ However, it was horses that were often used for short range pickup and delivery jobs during this period. It is possible that the UK's highly urbanised population relative to other countries had a role; we also see, especially in the UK that milk, bread and laundry services were managed by regional co-operative societies, which had the relative financial capital and stability to afford a fleet of electric vehicles. As well as this local fleet owners in Manchester managed to co-operate well with electricity supply authorities to get a standard, night-time charging tariff.²¹⁷ The variety of electric vehicles was demonstrated at the Electric Vehicle Association of Great Britain's annual exhibition, held in Manchester in 1939. There were 17 vehicles, from six manufacturers, including an ambulance, electric van and a coal delivery lorry as well as the more popular milk and bread delivery floats.²¹⁸

An example of a user of electric vehicles was the Manchester and Salford Equitable Co-operative Society (MSECS) which began using electric in 1935 with the purchase of four vehicles. By 1939 they had 82 electric vehicles in operation, which was on a par with the level of petrol vehicles they used.²¹⁹ Thirty of these vehicles were used to deliver bread house-to-house and the remainder were used to deliver milk, directly replacing horse and hand-drawn carts, although horses were still used for very dense work.²²⁰ Similarly to the laundry service described above the MSECS used petrol vehicles to supply 10 local depots where the electric vehicles worked about 20 miles a day. The *Commercial Motor* reasoned that drivers could get milk to customers earlier and more hygienically.²²¹ Similarly the electric vehicle was adopted by the United Co-operative Dairies, who distributed milk for 16 of Manchester's regional co-operative societies. Figure 33 shows the Bury Co-operative Society fleet featuring 4 milk and two bakery

²¹⁵ *Metropolitan Vickers Gazette* April 1939 p.95

²¹⁶ Mom, *Atlantic Automobolism* p.252;p.269

²¹⁷ *Metropolitan Vickers Gazette* April 1939 p.95

²¹⁸ *Commercial Motor* 3/2/1939

²¹⁹ *Commercial Motor* 21/4/1939

²²⁰ Ibid.

²²¹ Ibid.

delivery vehicles. One of the biggest orders, demonstrating the financial prosperity of co-operative societies, was made by the Bristol Co-operative Society which ordered 285 electric vehicles in 1939, although this was partly due to the fear of the War Department requisitioning their petrol fleet for a possible war.²²² As well as co-operative societies, urban corporations were also purchasing electric vehicles, for example Glasgow looked to electric as an alternative to horses for refuse collection, purchasing custom vehicles designed by Metropolitan-Vickers Electrical Co. Ltd (Metro-Vicks).²²³



Figure 33 - Bury District Co-operative Society - Metro Vick electric vehicle fleet - *The Metropolitan Vickers Gazette* April 1939 p.96

Metropolitan-Vickers, a diverse large electrical firm based at Trafford Park, was a prominent producer of electric vehicles during the 1930s. Activity started with interest from corporations and co-operative societies in the mid-1930s, and a department was set up for construction of vehicles. However, production was modest and orders intermittent. There was also Victors Electrics of Southport, founded by a bakery in 1923 to manufacture electric vehicles for their own use. During the 1920s there were

²²² *Commercial Motor* 3/3/1939

²²³ *Metropolitan Vickers Gazette* September 1937 pp.58-59

no known electric vehicle manufacturers in the UK, so the bakery looked at importing and found it too expensive.²²⁴ After using vehicles for four years they decided to produce electrics for the market for as little as £150 a unit. This firm represented one of the few successful entries into the motor industry during this period. This was the case because the firm found a niche of production due to its experience as a user. The electric vehicle had been used and tried as a taxi fleet, as private vehicles, and now found a long-term successful place as a replacement for the horse and cart for short distance delivery and pick up work, the use of which also showed the modernity and prosperity of the electric vehicle users.

Conclusion

Traffic and the “invasion” of the private motorcar and passenger vehicle in the countryside has been identified as an important paradigm of the interwar period, offering both working-class and middle-class families the opportunity of broadening their holiday and weekend options, in what Law describes as social convergence.²²⁵ Similar to the charabancs of the 1930s, the tramways in Manchester and surrounding areas that developed from the beginning of the twentieth century have been described as offering the working-classes the opportunity to live outside of walking distance to work, the majority of fares costing 1d or less in 1907, with fares subsidised by the Corporation.²²⁶ Oral history interviews recorded by Pooley and Turnbull highlight how the trams were both very cheap, and extremely frequent, and a preferred mode of transit for many working-class families. Indeed, trams in Manchester in 1930 carried a total of 400 million passengers, and this continued as motor services started to replace the tram system in the 1930s and 1940s.²²⁷ This compares to 1,248 cars parked in the city per week day, or roughly 350,000 a year, representing less than 0.1 percent of journeys into the city centre when compared to trams.²²⁸ Despite the tram’s important role in democratising travel there was a shift towards favouring the commercial motor vehicle by the TCSC and the council, in what was part of a social shift highlighted by O’Connell in his research on pedestrian safety,

²²⁴ *Commercial Motor* 1/2/1927

²²⁵ Law, “Charabancs and social class in 1930s Britain” p.41

²²⁶ Joyce, *Roads and Rails of Manchester 1900-1950* pp.50-52

²²⁷ Pooley and Turnbull, *A Mobile Century?* p.84; Joyce, *Roads and Rails of Manchester 1900-1950* p.59

²²⁸ Special Committee Minute Book Vol.12 – Meeting of the TCSC 31/1/1930

namely that the economic and political mass of the motoring lobby, both commercial and private, was starting to have a strong effect.²²⁹ Traffic was also important in the city's economy. Textile industry historian Dupree described the Manchester textile industry by 1938 as "a shadow of its former self".²³⁰ Traffic and the effectiveness of road haulage is an unexplored factor of the industry's demise.

Traffic even affected Manchester's reputation as a progressive city. Urban traffic during this period underwent massive change, not just in Manchester but in many other UK cities. This was generally caused by the massively increased potential of commercial motoring, deemed to offer a flexible and quick alternative to rail, canal or horse haulage; in Lancashire's case, with an industry which required the often-complex movement of raw materials, spun cotton and unfinished and finished goods, such a change was vital. This shift to motorised road transport has had a significant impact on our lives and is still prevalent today, although now we focus more on the problems of motor commuter traffic, rather than commercial. We see however the shift in dominance on the urban road, which started in the interwar period with the motor vehicle as a part of the whole but ended with its dominance of the road. This paradigm shift can only be understood if we look at the meanings and imaginaries created around automobilism during this period. The utopian visions championed by automobile advocates and manufacturers, especially the idea that the automobile represented "societal progress", were accepted by the council who looked to the automobile for solutions to traffic problems and planners, who started to recommend and re-design the city landscape to reflect the needs of motor traffic above other forms of mobility.

²²⁹ O'Connell, *The car in British society* p.143

²³⁰ Dupree, M., "Foreign Competition in the Interwar Period" in Rose, M. B. ed., *The Lancashire Cotton Industry* (Lancashire County Books, Preston: 1996) pp. 264-295

2.6 - Chapter 2 conclusion

This chapter has focused on the sociotechnical imaginaries surrounding the automobile: broadly, that as the automobile improved it could help solve some of the problems of society. These imaginaries generally revolved around increasing the speed of the conveyance of goods, people and services, which in turn improved economies for all. It has been argued that this imaginary had a particularly strong impact on the emergence of commercial motoring which was neither particularly reliable nor economical in the Victorian and Edwardian period. During the interwar period the sociotechnical imaginaries were not just promoted by motoring advocates but had been accepted generally by local councils, planners and the wider business community. The utopian visions of the automobile speeding goods, people and public services across the country grew to widespread acceptance, an important aspect of which was the symbolic power of the automobile as representing both technological and social progress, and modernity. The commercial vehicle played an important role in legitimising the early use of the automobile and in bringing about a wider acceptance of the technology. Users, non-users and manufacturers have been shown to play a part, shaping the general direction of technical innovation and closing the gap between the imagined future and the technical and infrastructural realities of the day.

We have shown that commercial motoring deserves more scholarly attention. Often a sub-category of the automobile, and rarely studied in much depth, the concept of the utility of motoring, an argument often used to justify automobilism, was used frequently from the beginning of automobilism around 1896 through the interwar period. Studying this, and the development and acceptance of the commercial motor vehicle, can help us understand more about how the automobile in general moved from an unreliable technological curiosity to a ubiquitous and integral factor in Western society.

So far in Chapter 1 we have looked at alternative explanations for the diffusion of the automobile, to technological determined economic theories. In Chapter 1 we showed how cultural aspects moulded the automobile's adoption by an examination of the user. Similarly, in Chapter 2 we have seen how sociotechnical imaginaries and intermediary actors such as the LSTPA also played their part in influencing

manufacturers and technological development. Thus, in the final chapter, on the automobile industry, we will continue to challenge economic theories by looking at how the evolving automobile culture, the user, and the automobile dealer, influenced the manufacture of the automobile.

Chapter 3 - The North-West's motor industry

3.1 - Introduction

This chapter explores the motor industry in north-west England from 1896 to 1939, including regional motor manufacturers and automobile agents and dealers. It examines their relationship both with the region, the engineering workforce, and with the growing number of automobile users discussed in earlier chapters. In the literature review we identified several areas in which UK automobile scholarship is weak, which we shall address in this chapter. These include a lack of studies for outside of Coventry, an absence of research on motorcar dealers, and an imbalance of focus on motorcars and the interwar period. Considering the previous two chapters we will also look to reconcile the economic and cultural views of the emergence of motoring and motor manufacturing which we identified as forming two separate streams of automobile scholarship.

The first section will start with a statistical overview of the regional motor industry. Analysis shows a much greater number of firms producing automobiles than expected. The reason for this is the identification of many experimental and short-lived local manufacturers in the pre-1914 period. While scholars acknowledge the existence of such firms, they do not feature in statistical analysis, or detailed study. For example, Saul commented that, "then came the flood of tiny engineering firms which mostly failed within a very short time in a boom between 1901-1904".¹ Why they failed is not explored. Later, Foreman-Peck, Bowden and McKinley argued that entry into the industry was rapid until a trade slump in 1907-1908, without going into detail.² Small manufacturers are missed because they are economically insignificant, and source material is elusive because of the brevity of their existence. This makes statistical analysis difficult, and inaccurate; and a comparison with national statistics redundant, as so many of these small firms are missing from national analysis. This therefore raises some important questions and areas for further research: why did these small firms start manufacturing? Why were they so brief? Regional and economic

¹ Saul, "The Motor Industry in Britain to 1914" p.23

² Foreman-Peck, Bowden and McKinley, *The British Motor Industry* p. 12

scholarship arguments are relatively straightforward, although in some cases they are implied due to lack of focus in this area: that these firms failed to get capital investment to successfully increase manufacturing scale, and therefore could not compete with large firms who came into the industry later and could afford to produce cars at a greater economy and at a greater scale.³

These questions lead us to the second section, on the origins of the industry in North-West. This section looks more closely at identifying and exploring regional firms who entered the industry during this early period. Furthermore, analysing these firms and individuals can help us to explore the direction of technological innovation. These firms often had local links to cycling and thus were close to potential users, and the ready “bicycle culture” that has been argued as so important for fostering enthusiasm for the automobile. Secondly many early designers and manufacturers were themselves users;⁴ indeed there are several examples of knowledgeable users who made vehicles independently. Small local cycle and motor manufacturers and agents were themselves keen users. We saw in Chapter 1 how sceptical cyclists noted that most motorcycle users they noticed in were involved in the trade.⁵ These “traders”, either early agents or manufacturers, played a role in generating interest among potential user groups; they did so by promoting vehicles at local cycle and motor shows organised through local trade organisation. While many of these firms might have briefly manufactured automobiles and indeed probably did exit manufacturing for economic reasons, they often continued in the industry as local agents for the larger manufacturers using their experience in design and use, as well as their knowledge of local motoring to promote and sell other automobiles. Analysis shows that entries into the industry came from a large range of other industrial backgrounds including textiles, coachbuilding and electrical engineering. Understanding why these individuals and firms entered the industry is difficult, although analysis of sources when they are available suggests that these “experimental” firms were inspired not so much by the prospects of economic gain but by less tangible factors such as engineering curiosity,

³ George, “The rise and fall of the Manchester motor industry” p.202;

⁴ 13 vehicles were classed as “made by owner” between 1904 and 1907 in Cheshire registration analysis Horner (forthcoming publication, 2019)

⁵ *Manchester Courier* 23/3/1903

personal experience of motoring, or a more general belief in the future of the automobile.

The third section focuses on the dealer and agent, and the sale of the automobile, an area of study that has been described as “the true ‘missing masses’ of technology studies”.⁶ In order to remedy this, this section examines the unique archive material from local businesses: coachbuilder Joseph Cockshoot and Co. and car dealer Quicks, both based in Manchester. By looking at these firms this section highlights the important role of the regional agent and dealer in connecting the user, or customer, to the manufacturer, the way in which dealer and agent networks could be used to market automobiles, the importance of long lasting relationships between dealer and manufacturer, and the way in which dealers were integral to the success of manufacturers.

The final section finishes by looking at specific regional factors that affected either the demise or movement of motor manufacturing firms. Analysis shows that generally there were few regional aspects that were important. However, labour in the motor industry played a role in regional performance. The management of labour and the ability for automobile workers to organise is an important aspect of the automobile industry and forms part of the larger narrative looking at the fate of the UK’s motor industry after the Second World War.⁷ This section looks at labour organisation in Manchester during the First World War and the 1920s in order to engage with arguments on this subject that suggest regional differences in labour organisation played a part in regional performance.⁸ While Coventry in particular has been the source of much study in this regard, Manchester has not. Analysis of union activity in the automobile sector shows that unionisation in Manchester, compared to other centres of the automobile industry, was relatively strong. Furthermore, national events such as the iron moulders’ strike of 1919-1920 and the Engineering Employers

⁶ Pinch, “Giving Birth to New Users” p.248

⁷ For example, Foreman-Peck, Bowden and McKinley, *The British Motor Industry* pp.165-190 highlight how labour relations, management and organisation were important factors in the decline of the British motor industry

⁸ Tolliday, “Management and Labour in Britain 1896-1939” p.42; Foreman-Peck, Bowden and McKinley, *The British Motor Industry* p.64; Thoms and Donnelly, *The motor car industry in Coventry* p.81

Federation (EEF) played an important role in the regional performance of the automobile industry and affected firms in radically different ways, complicating our understanding of labour relations and the industry during the interwar period.

3.2 - Statistical overview and regional context

A statistical analysis complements the largely qualitative data used in this chapter and the rest of this work. High level statistical analysis has been used by economic automobile scholars in order to draw conclusions about the national industry. However, a lack of comparative depth in regional studies has led to some errors in information in national studies which especially affects analysis of the pre-1914 period. Saul provides a table for national production for 1913, which he puts at 34,000 and proceeds to breakdown by manufacturer. He lists Belsize, a prominent Manchester firm, as producing roughly 1,000 vehicles. Yet investigation of company records, contemporary newspaper reports and trade journals puts estimates for production in 1913 closer to 3,000 vehicles a year, a considerable difference from 3.4 percent of the national market to nearer 10 percent. Saul's table has subsequently been used by historians although several urge caution when using these figures.⁹ Similarly historians since Saul have erroneously categorised Belsize as originating from the cycle industry, even those who have subsequently explored the firm in more detail such as Clayton (2004), George (1989 and 2004) and Worthington-Williams (1984).¹⁰ These mistakes highlight the relatively poor research into Manchester based companies, although this is largely because automobile historians have not been aware of the dedicated local research of Manchester motor historian A. D. George.

One of the main problems with Saul's analysis of survivability and geographical location is that the large number of small firms that operated regionally do not feature in his analysis. Similarly, scholars focus on motorcar manufacturing rather than commercial and motorcycle manufacturing which were also important parts of the industry, as demonstrated in the previous chapters. Demonstrative of this failure in national analysis is the large number of firms that research has uncovered in the region, both by this research and the work of George. This is indicated by the 138 manufacturers of motor vehicles found in the North-West between 1896 and 1939, a

⁹ Riley, Lilleker and Tuckett, *The English Model T Ford* p.72; Beaven, *The Growth and Significance of the Coventry Car Component Industry* p.46

¹⁰ Historians who categorise Belsize accordingly include Saul, "The Motor Industry in Britain to 1914" p.25-26; Peck, Bowden and McKinlay, *The British Motor Industry* p.14 and p.30; Lewchuck, W. A., *American Technology and the British Motor Vehicle Industry* (Cambridge: Cambridge University Press, 1987) pp.124-125; Tolliday, "Management and Labour in Britain 1896-1939" p.41; Georgano, Baldwin, Clausager and Wood (1995) pp.32-3 & pp.59-60

much larger number than expected at the start of this study. These firms and the information known about them are listed in Appendix 1. These high numbers can be explained by the relatively large numbers of small firms in existence at the beginning of the industry. Many of them were cycle producers, or cycle shop owners who motorised their products by purchasing components such as an engine and attaching these to the cycle frame. However, there are still many significant later firms missed by national analysis. For example, Saul lists three motorcar manufacturers based in Manchester in 1913: Ford, Belsize and Crossley. However, there were at least 5 others producing cars or cyclecars. These included Newton and Bennett, Haynes Economy Motors, Bell Brothers, Jackson and Edwards, Robertson and Woodrow.

The problem with this difference is a lack of sources and a lack of detailed research on smaller firms. This has been helped by Georgano's encyclopaedia of the automobile, a meticulously researched list of motorcar manufacturers that includes many small firms and short-lived manufacturers. Georgano's work looks to explore not just prominent manufacturers but all those with: "intention to manufacture, even if it was not a success, and resulted in more than a single prototype."¹¹ Georgano's encyclopaedia postdates many of the prominent economic works on the motorcar, with the obvious result that Georgano's work identifying motor manufacturers is missing from the body of analysis.¹² A more accurate data analysis can be found in Marr's work on the British motorcycle industry which used a number of well researched motorcycle encyclopaedias to gather data.¹³ Having said this, encyclopaedias still miss the most fleeting and small of firms, many of which only have one or two sources documenting their existence. This makes it difficult to be certain if firms manufactured and sold any vehicles. For example, the only source for the Express Motor Vehicle Company in Manchester was the auction of assets on winding up advertised in the local newspaper: listed are a number of motor vehicles, many of which were produced by other firms and named as such, but a few were unnamed so were probably

¹¹ Georgano, N., *The Beaulieu Encyclopaedia of the Automobile* (London: Routledge, 2000)

¹² Particularly Church, *The rise and decline of the British motor industry* and Foreman-Peck, Bowden and McKinley, *The British Motor Industry*

¹³ Such as Bacon, R. and Hallworth, K., *The British Motorcycle Directory: Over 1,100 Marques from 1888* (Marlborough, UK: Crowood Press, 2004) and Tragatsch E., *The New Illustrated Encyclopedia of Motorcycles* (London: Quarto, 1992)

constructed by the firm.¹⁴ Insufficient information is available in several of these cases to gather even basic data, such as when they entered and exited the industry. Manufacturers can also be known primarily as agents. Several produced their own versions of vehicles and continued for many years as automobile agents; firms such as William Lea of Liverpool owned a large motorcar depot in Manchester, and operated for many years as a motorcar agent, but also produced the “Liver” car for an unknown number of years during the early 1900s. Similarly, L. F. Harvey and Co. produced their own “New Pick” motorcar in 1907 but were also agents for Rex and Roc motorcycles, and later agents for commercial vehicles.¹⁵ This lack of information creates problems for basic statistical analysis and thus Figure 34, showing entry and exit figures, has excluded firms where the years of operation are unknown or cannot be approximated.¹⁶

That said, Figures 34 and 35 track the entries and exits in the North-West’s motor industry, whilst Figure 36 shows the number of firms overall in the industry in each year. Again, these charts do not include many firms for which no clear chronology is possible. This is particularly the case for motorcycle manufacturers as only 7 out of 45 can be dated; for most of these the only source is the *Motor and Cycle Trade Directory* published in 1906, which highlights many firms’ operating in this year; subsequent research has failed, in most cases, to find further information. Local trade directories, such as the annual *Slater’s Manchester, Salford and Suburban Trade Directory*, are useful for providing basic information on firms; however, the categorisation of firms makes some of the listings inaccurate. Several manufacturers identified in the *Motor and Cycle Trade Directory* of 1906 are not listed in the trade directory as “motor manufacturers”, but instead are listed under “cycle makers and dealers” probably because this was their primary trade. These issues mean that statistical analysis needs to be viewed as giving a rough overview rather than an accurate mapping of the industry. The North-West follows national trends in the motor industry in several ways. First the period between 1896 and 1905 is marked by many firms entering the industry, followed by a period of a large number of exits between 1906 and 1909. This

¹⁴ *Manchester Guardian* 3/5/1904

¹⁵ *Motorcar Journal* 16/2/1907; *Motorcycle* 13/2/1907; *Commercial Motor* 24/2/1910

¹⁶ All firms are listed in Appendix 1

pattern is recognised by Marr for the motorcycle industry in the UK, and Beaven in his overview of entries and exits in the national industry.¹⁷ Similarly a peak in entries between 1919 and 1921 is recognised as a national trend following post-war optimism and demand, followed by production being concentrated in the hands of fewer and fewer manufacturers during the interwar period.¹⁸

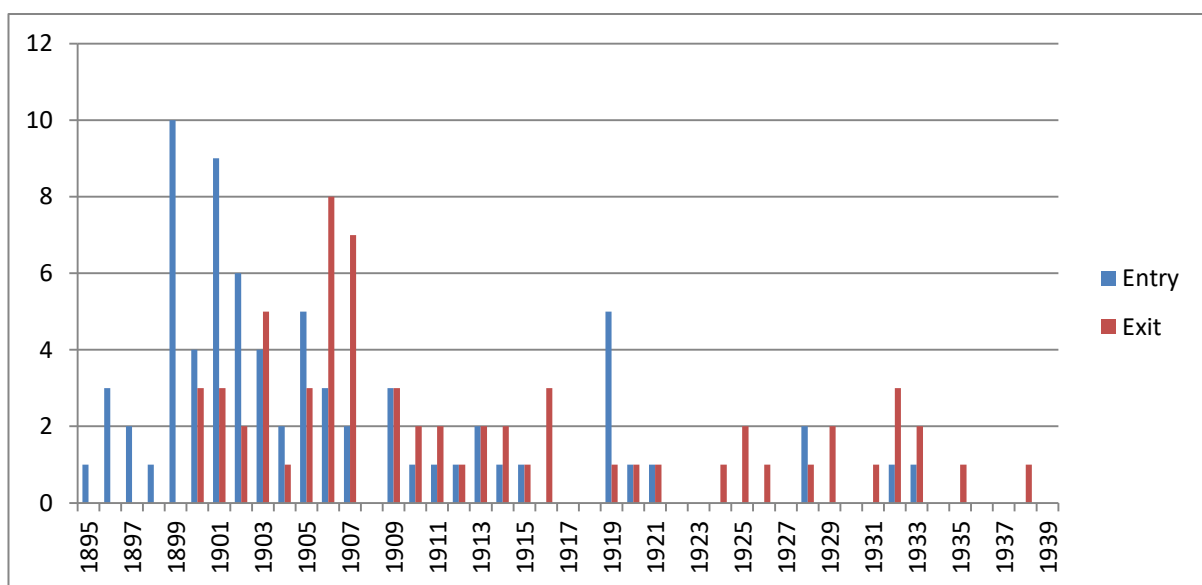


Figure 34 –Overall entries and exits in the motor industry in the North-West per year, 1895-1939

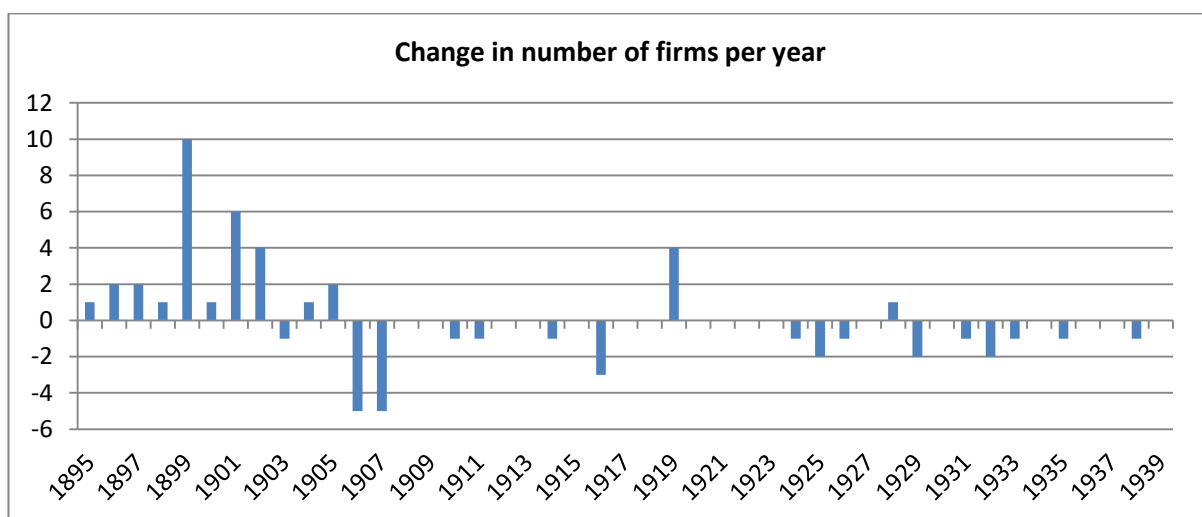


Figure 35 - Change in the number of firms per year in the North-West, 1895-1939.

See Appendix 1 for data and sources

¹⁷ Marr, "The geography of the British motorcycle industry, 1896-2004" p.170; Beaven, *The Growth and Significance of the Coventry Car Component Industry* p.46

¹⁸ Miller and Church, "Motor Manufacturing" p.186

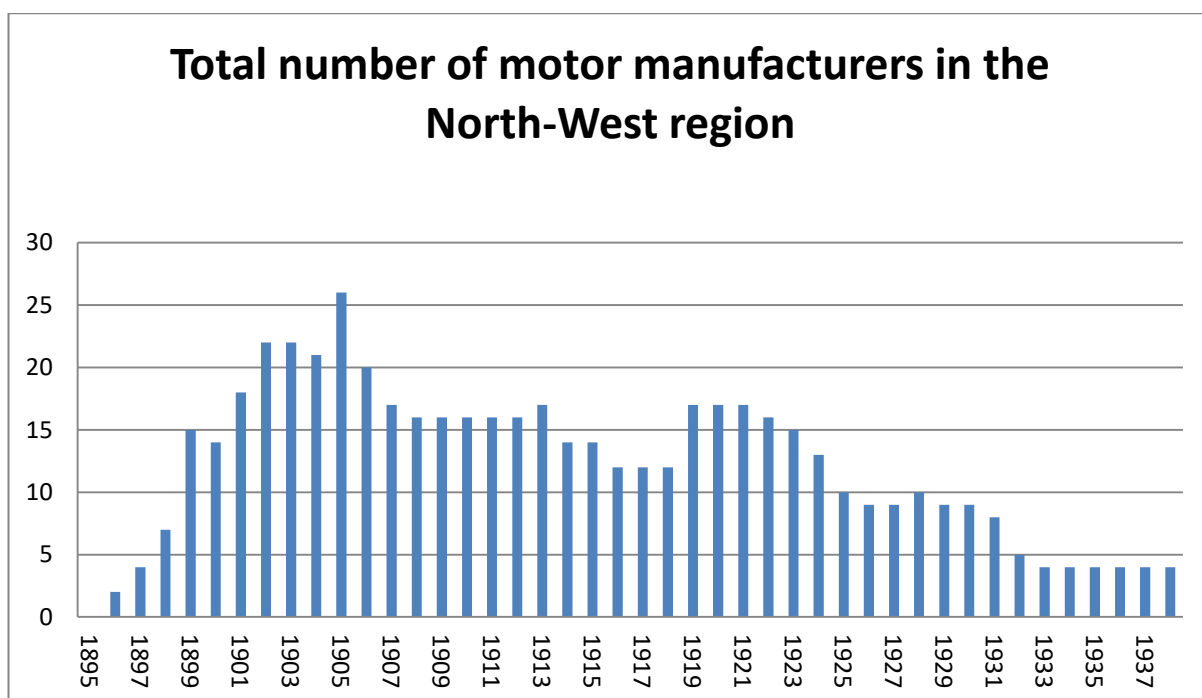


Figure 26 – Total number of motor manufacturers in the North-West – See Appendix 1 for data and sources

The problems surrounding the documenting of firms in the early years means that a comparison cannot be attempted with Saul’s analysis, or with Foreman-Peck, Bowden and McKinley’s examination of the survival of motor firms pre-1914. The latter’s work shows that a higher proportion of pre-1900 firms survive to 1914 than of those who start between 1901 and 1905. The difference is significant, with more than 1 in 3 pre-1900 firms surviving, compared to 1 in 10 of those who started between 1901 and 1905.¹⁹ This ratio of survival might also apply to the North-West, but the validity of the two studies can be doubted, due to the previous discussion.

The North-West’s motor industry then, was generally more numerous than scholars suppose; although this is likely the case for other areas of the country where small firms or individual constructions have also gone unrecognised. This economically insignificant group of small manufacturers are little studied and is an aspect we will be exploring in the following section on the origins of the industry.

¹⁹ Saul, “The Motor Industry in Britain to 1914” p.23; Foreman-Peck, Bowden and McKinley, *The British Motor Industry* pp.12-13

3.3 - The origins of the motor industry

Cycling

Automobile scholarship has long established the importance of the cycle industry in the origins of motor manufacturing in the UK. This has been clearly demonstrated in the cycle industry's heartland of Coventry and the Midlands, where by 1913 75 percent of Coventry's motor vehicle output came from firms that had a cycle background.²⁰ Scholars emphasise the obvious technical link, reasoning that all the Coventry cycle firms that expanded into automobile production were successful.²¹ Scholars have also stressed the economic link as many cycle firms entered the motor industry for reasons of alternative income following the end of the cycle boom in the late 19th century.²² More recent scholarship has emphasised the cultural link between cycling and motoring. The established "bicycle craze" created a ready culture that embraced the experience of speed, tinkering and touring that formed the basis of automobile culture.²³ We examined the complex nature of this cultural link in Chapter 1 highlighting factors such as speed, novelty and peer pressure as aspects of the automobile's uptake. This section will look at cycle firms in Manchester and will argue that cycle culture created a ready consumer group for early automobiles, which local cycle manufacturers and agents very quickly identified. This is demonstrated by the actions of local trade organisations and small cycle producers. Manchester's cycle industry shows a small, but growing, locally significant industry which served the needs of cyclists in what became a popular local pastime. Small firms have not previously been explored in scholarship, which has instead focused on large manufacturers and national clubs. An overview of Manchester's cycle industry will be followed by an examination of the links between cycling and motoring in Manchester.

²⁰ Thoms and Donnelly, *The Motor Car Industry in Coventry* p.14

²¹ Thoms and Donnelly, *The Motor Car Industry in Coventry* p.24; Saul, "The Motor Industry in Britain to 1914" p.26; Foreman-Peck, Bowden and McKinlay, *The British Motor Industry* p.9 (argues that the bicycle industry was an incubator for motor vehicles)

²² Thoms and Donnelly, *The Motor Car Industry in Coventry* p.26; Millward, *Factors Contributing to the Sustained Success of the UK Cycle Industry* p.124

²³ Mom, *Atlantic Automobilism* p.63; Reid, *Roads Were Not Built For Cars*

Manchester's cycle industry

Apart from work by Nick Clayton, scholarship on the cycle industry tends to focus on the Midlands, the industry's centre. Clayton's article on the Manchester cycle industry from 1870-1900 provides a history of some of the important Manchester cycle firms and offers an overview of cycling interest in Manchester. However, like economic historians of the automobile, Clayton focuses on large, economically significant manufacturers leading him to conclude that: "lacking major cycle makers at the end of the century, the region consequently spawned relatively few local motorcar companies."²⁴ While Manchester certainly lacked major cycle makers, it spawned dozens of automobile manufacturers, which had a prior or parallel relationship with the local cycle trade.

McLeay showed that in 1891 88 percent of cycle firms were situated in Wolverhampton, Birmingham and Coventry.²⁵ Millward examined data from national trade directories and compiled a database for the number of firms engaged in the cycle industry from every year until 1939. This data is useful for comparative research on a local level. For example, in 1900, there were 3,329 companies listed as cycle manufacturers and agents nationally.²⁶ The Manchester and Salford trade directory shows 191 firms in Manchester for the same year, 5 percent of the national figure, a small but significant percentage. Sources for Manchester's cycle industry include trade directories, trade periodicals, show catalogues, advertising material and local newspaper reports. Trade directories provide the names, locations and numbers of companies every year which allows for a certain amount of statistical analysis. While the number of firms is a useful indicator of the size of an industry, there are no volume statistics available; therefore, firms producing radically different volumes carry the same weight. This is particularly important when comparing Manchester's cycle industry to the Midlands. The Manchester Cycle Manufacturing Company,

²⁴ N. Clayton, "A Missed Opportunity?" p.193

²⁵ McLeay, P. "The Wolverhampton Motor Car Industry 1896-1937", *West Midlands Studies* 8, Winter (1974) p.100

²⁶ Millward, *Factors Contributing to the Sustained Success of the UK Cycle Industry* pp.163-4

Manchester's biggest bicycle manufacturer, had a capital of £50,000, significantly less than many Midland producers.²⁷

Trade directory research shows that the cycle trade in Manchester developed on similar lines to the national industry. Although it was small, it was healthy, and had a regional identity. Figure 38 shows that the number of firms started to increase rapidly from 1896 to 1900 reflecting the cycle boom of the 1890s. Numbers also appear to be relatively unaffected by the end of the cycling boom at the turn of the century. This is contrary to the national trend, which saw a decrease in the overall number of firms.²⁸ This is perhaps a reflection of the small size of the Manchester firms, whilst larger firms based in the Midlands struggled due to increasing competition in the export market.²⁹ This saw the demise of Manchester's biggest firm, the Manchester Cycle Manufacturing Company, which relied on their overseas market.³⁰

Trade directories also show the areas in which the cycle industry was operating in Manchester. Although the majority of businesses were in the city centre, there were significant pockets of firms in Hulme and Salford, and to a lesser extent Ardwick, Chorlton-on-Medlock and Moss Side (Figure 38). The number of firms in "other" locations shows the large dispersal around Manchester, reflecting the large number of suburban cycle clubs and cyclists. The component and accessory industry was much smaller, but numbers increased at the same time as the number of cycle agents and manufacturers seen in Figure 39.

²⁷ *Manchester Guardian* 22/7/1897 p.11

²⁸ Millward, *Factors Contributing to the Sustained Success of the UK Cycle Industry* p.164

²⁹ Thoms and Donnelly, *The motor car industry in Coventry* p.29

³⁰ It is no coincidence that several surviving models are located abroad in the USA and France: [Anonymous], "Irwell – Manchester Cycle Manufacturing Company Limited" *Elm City Commuter*, <https://elmcitycommuter.wordpress.com/2010/03/19/irwell-%E2%80%93-manchester-cycle-manufacturing-company-limited/> (date accessed 26/01/2017)

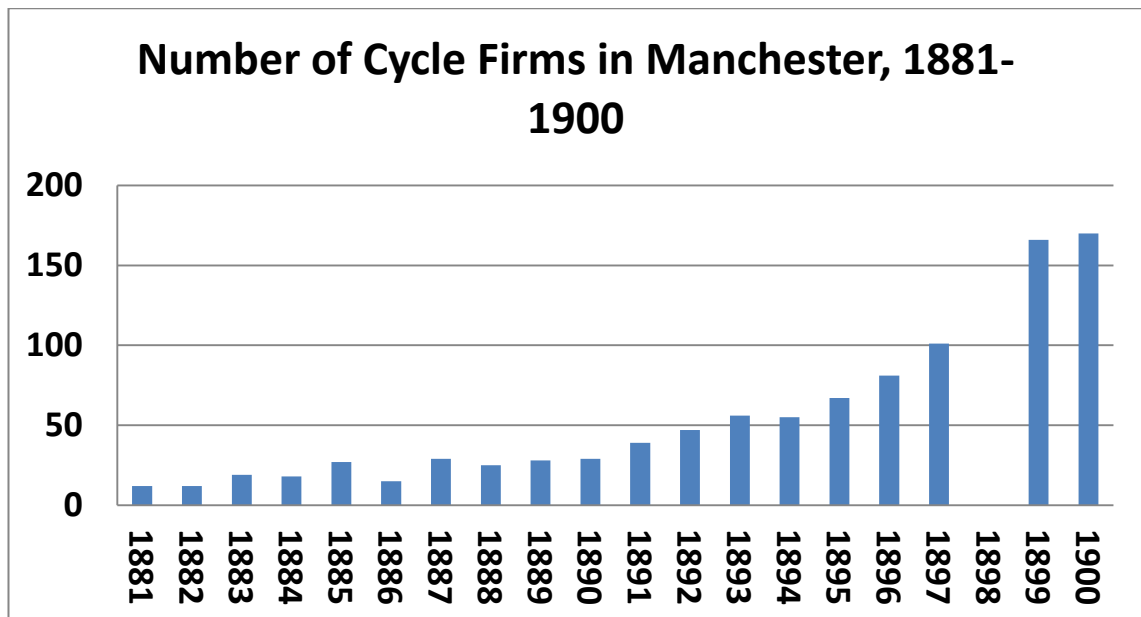


Figure 37 - Sources: *Slater's Manchester and Salford Trade Directories* (1881-1900)
(trade directory for 1898 missing)

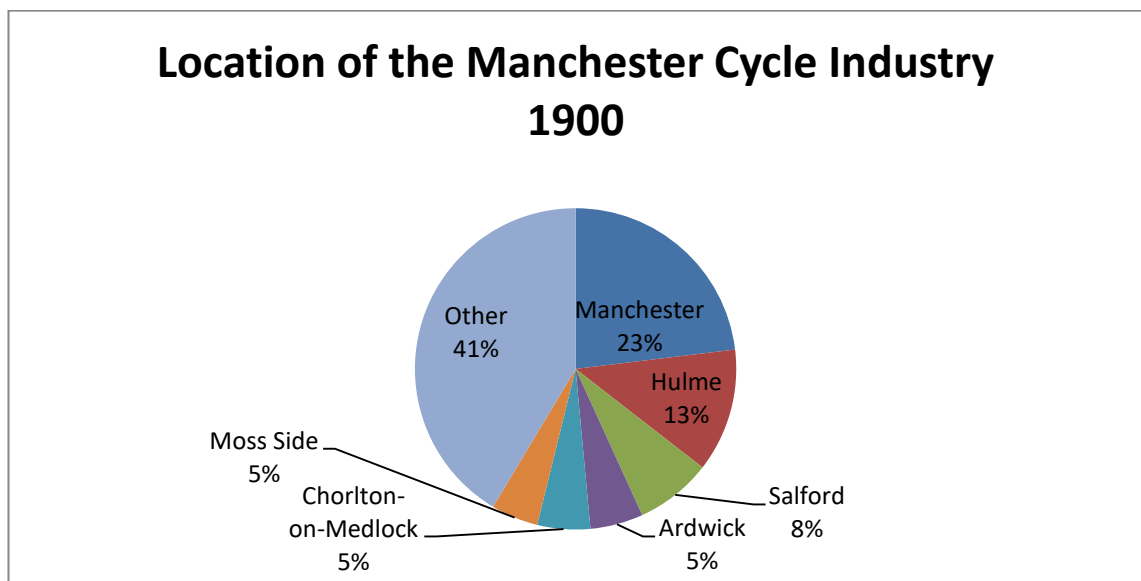


Figure 38 – Source: *Slater's Manchester and Salford Trade Directory* (1900)

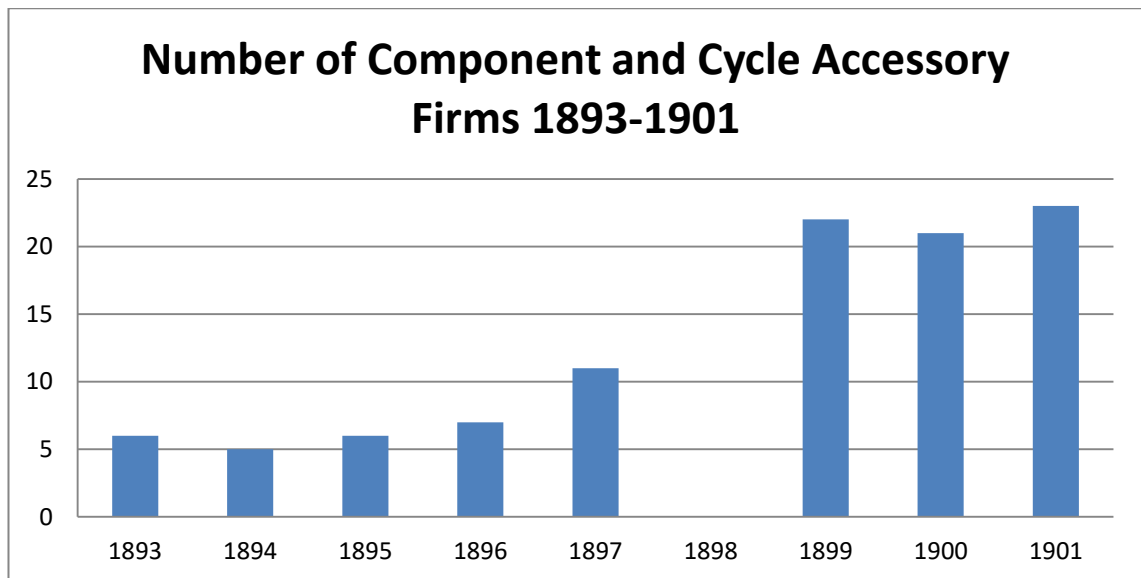


Figure 39 - Sources: *Slater's Manchester and Salford Trade Directories (1883-1900)* (trade directory for 1898 missing).

The Manchester cycle industry was small but significant enough that in 1896 the Manchester and District Cycle Trades' Association (MDCTA) was established to protect local interests. The Association organised the Manchester Cycle Show from 1897, which became the Manchester Cycle and Motor Show (MCMS) in 1899. The show was increasingly popular and a catalogue for the 1899 show proudly states that it was: "over applied for before a single advertisement appeared in any journal".³¹ Further demonstrating the health of the industry was a report in the *Manchester Guardian* during the 1898 show:

One thing the exhibition makes very clear is the extent to which the manufacture of cycles is becoming a Lancashire industry. A large number of Manchester firms are represented, and machines have been sent in from almost every town in the district – in particular from Oldham, Bolton, Bury, Rochdale and Blackburn. The quality of the Lancashire work is extremely good.³²

Despite the northern bias, analysis of the exhibitors at the 1899 show does demonstrate the strength of local manufacturing: 50 of the 67 stands for cycles were taken by Lancashire manufacturers.

³¹ Manchester Central Library Archives - *Manchester Cycle and Motor Show Catalogue 1899* p.6: BR629.2Cy1

³² *Manchester Guardian* 19/2/1898

Manchester's cycling and motoring links

Early links are in evidence when we examine the MCMS and the organisation of the MDCTA. Of the eight companies that had motorised vehicles on show at the MCMS of 1899 (two motorcars, six motorcycles), seven were also exhibiting a variety of cycles.³³ Frank Bullock, one such exhibitor, was the owner of the Strangeways Cycle Company, and a committee member of the MDCTA. He showed a very early interest in entering the motor industry, advertising several times in *The Autocar* during 1896 and 1897, including:

All kinds of light autocar and motor work undertaken – F. Bullock, Strangeways Cycle Works³⁴

Advertiser with workshops situated in Manchester is open to undertake experimental autocar and motor work, or would manufacture any specialty under contract³⁵

Several other individuals involved in the 1899 show were also prominent in both the cycle and motor industries. For example, John Newton, committee member of the MDCTA, was an agent for Enfield Cycles, before partnering and becoming motorcar agents and then manufacturers. There was also Fredrick Nawell of Hulme who went from ironmonger, to cycle maker and dealer, to motor manufacturer and back again finally to ironmonger. Ralph Jackson, cycle maker from Altrincham, went from making bicycles to manufacturing the Century tandem, which took part in the 1900 Thousand Mile Trial.

There were also firms far less committed to either industries. Baxendale and Co. exhibited both “Beanco” cycles and motorcycles at the 1899 show, which must have been a brief venture from a company whose “Beanco” trademark covered products from toilet seats to golf balls. The number of firms at the 1899 show exhibiting both motorised and non-motorised cycles was relatively small: under 10 percent of exhibitors. Despite this by 1906 about 40 small firms in Manchester were making both

³³ *Manchester Cycle and Motor Show catalogue 1899*

³⁴ *The Autocar* 21/11/1896; *The Autocar* 30/10/1897

³⁵ *The Autocar* 30/10/1897

bicycles and motorcycles, most of which would have been based on the same basic cycle frame, with both bicycle and motorcycle having the same name.³⁶ There are several examples of this in the 1906 trade directory (see Figures 40 and 41). The clear technical crossover between cycle and motor manufacturing in these earlier years made it easy for the small Manchester firms to experiment. In Chapter 1 we explored the relationship between local cyclists and motoring, and it is likely that customers of these firms fuelled this experimentation as local cyclists were exposed to this new form of mobility. These potential customers were also exposed to motoring through the showing of machines at local events such as the annual MCMS and through club runs.

A stronger connection with local users, or potential users, can help us explain the large number of early experimental firms. Economic analysis shows how many large cycle firms entered the industry much later than many of these small experimental firms. Rover, Triumph, Swift and Singer, - large Coventry based firms - were relatively late to start production; for example, Rover and Triumph only started producing motor vehicles in 1902.³⁷ Thoms and Donnelly highlight that the industry was relatively unprofitable for around the first decade from 1896, and that larger firms benefited from the pioneering experimental work of smaller firms, when they later entered the industry.³⁸ It is difficult therefore to explain the large number of experimenters without considering automobilism, the imagined or potential user, and the sociotechnical imaginaries and enthusiasm that it created.

³⁶ *The Motor and Cycle Trade Directory of Great Britain and Ireland* (London: Rockliffe Bros, 1906) – Entries under “Manchester” pp.139-149

³⁷ Thoms and Donnelly, *The motor car industry in Coventry* pp.32-33

³⁸ *Ibid.*



Figure 40 – WM. Wilson advert - Source: *Motor and Cycle Trade Directory* (1906)
p.144

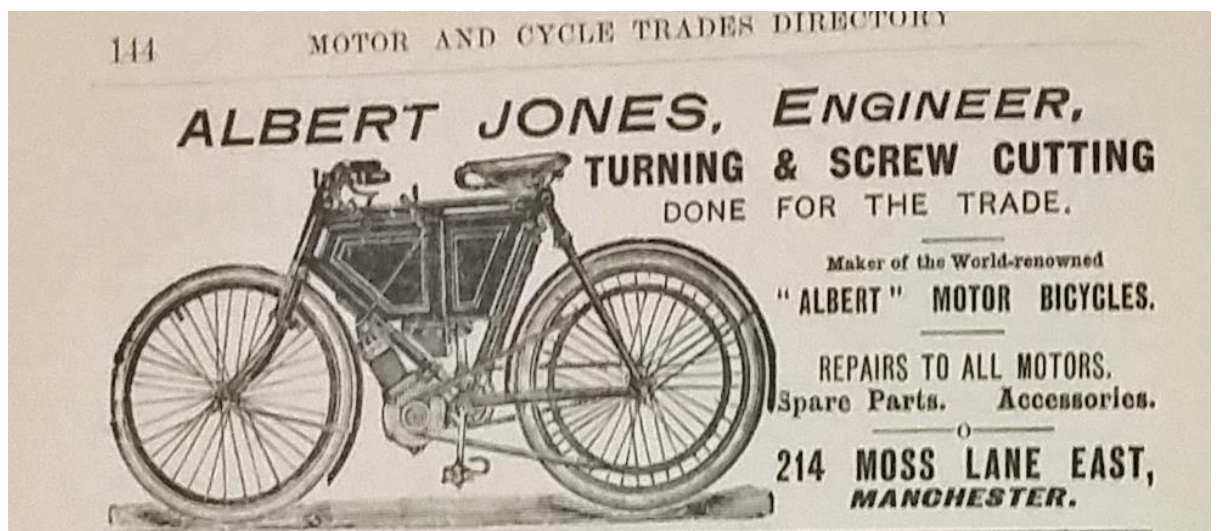


Figure 41 – Albert Jones advert - Source: *Motor and Cycle Trade Directory* (1906)
p.144

The complex motivations and relationships of early manufacturers can be seen in the design innovation of motorcycles which so closely resemble the pedal bicycle. Taking a particular aspect such as the persistence of pedals on motorcycles not only shows the technological influence of cycling, but also the expectations of the user and designer. This provides a good example of how the innovation of technology is, as Mom argues, “a complex societal phenomenon”.³⁹ Initially it was thought that the motor could offer cyclists auxiliary power. Thus the cycling experience was not radically being altered but

³⁹ Mom, “Translating Properties into Functions” p.173

enhanced as in the case of the motorcycles in Figures 40 and 41, by an auxiliary motor. This auxiliary wish has been highlighted previously, although the reality often differed from expectations, as explained by the *Manchester Guardian* cycling columnist:

Often a wish is expressed by cyclists that they could have some light motor clipped on to their machines to help up hills or when they become fatigued. Motors have been clipped to cycles, but the cyclist soon finds that it is uphill where he must help the engine, and that it will only run alone when the running is favourable⁴⁰

Why then did pedals persist for several decades of motorcycle design? One factor is that the pedals were engineered as a starting mechanism for the engine.⁴¹ Another is the unreliability of the early combustion engine, the pedals being used to recover a vehicle from a breakdown. The design is however more understandable if we use the theoretical framework developed by Mom in Figure 1.⁴² Using this model pedals reflect the need of cyclists (users) for some sort of physical exertion. This need was identified in chapter 1, and is encapsulated in the desire for “auxiliary” power despite the unachieved reality of “auxiliary” power. If we look at trade journals and the actions of organisational bodies (intermediary actors) we see other attitudes and problems with pedals expressed which adds to the picture of the complex sociotechnical interactions surrounding a particular aspect of cycle and motorcycle technology. *The Motor Cycle* argued that pedalling should not be allowed in races, such as the yearly T. T. race organised by the Auto Cycle Club, as the auxiliary power from pedalling varied from rider to rider and thus was not a fair reflection of the competing machines’ capabilities.⁴³ Here we see a flip of the “auxiliary power” concept. Rather than the motor aiding the pedalling cyclist, the pedalling motorcyclist was pedalling to enhance the performance of the engine and thus was believed to be adversely affecting the development of the “ideal” touring motorcycle.⁴⁴ This is reflected in “pedalling” and “non-pedalling” classes for hill climbing competitions such as the Motor Cycle Union of Ireland’s hill climb in 1907. The margin of difference was minimal: four riders who

⁴⁰ *Manchester Guardian* 27/11/1901

⁴¹ *Motor Cycle Journal* 2/1/1907 p.18

⁴² Mom, “Translating Properties into Functions” p.172

⁴³ *Motor Cycle Journal* 26/6/1907 p.503

⁴⁴ *Ibid.*

entered both competitions only averaged of 9.5 seconds slower when not pedalling.⁴⁵ Further to this an anonymous motorcycle manufacturer believed that:

if I sold only machines that were not fitted with pedals the sales would decrease, as practically every [unreadable word] pedals his motor away in the manner he has been used to on a push bicycle.⁴⁶

Here pedalling takes on a different function, offering the cyclist a familiar action, while providing limited technological advantage. This hybridity can also be seen in heavier early automobiles which used carriage technology for bodies and suspensions; on top of this tiller steering was widely used before 1900, associated with water navigation.⁴⁷ In these changes there was familiarity, but also other psychological relationships. For example, Mom argues that the way in which motorists physically and psychologically “looked down on commoners” was inherited from carriage culture. This aspect can be seen clearly in evidence explored in Chapter 1 where MAC members act in a cavalier manner towards local residents.

The development of motorcycles with pedals by experimental manufacturers can be seen to reflect the vision of the motor bicycle as offering an enhancement of the cycling experience. This was an imaginary vision for the technology that did not necessarily reflect the realities of use, in a similar way to the commercial vehicle imaginaries and realities discussed in Chapter 2. The persistence of the pedal, and changing realities of the “auxiliary” power concept shows how the imaginaries of users and designers and the realities of use and the attitude towards peddling in racing were complex interactions that not only shaped the direction of technological innovation but inspired engineers.

Small firms linked with cycling and the cycle industry, were often brief and insignificant from an economic point of view. Output was small, profits, if any, were therefore modest and they were unlikely to get investment. However, in the mediation between designer and user to form the technological artefact these firms played an important role; like the agent and dealer in later sections they were closer to their customers

⁴⁵ *Motor Cycle Journal* 31.7.1907 p.610 For example J. F. Gillespie set a pedalling time of 4m. 40s. and a non-pedalling time of 4m 48s. only 8 seconds slower when not pedalling

⁴⁶ *Motor Cycle Journal* 24/7/1907 p.598

⁴⁷ Mom, *Atlantic Automobilism* p.62

than large manufacturing firms who relied on agents to sell their products. Figure 50 for example shows how customers of small firms such as Eagle (Altrincham) and Robinson and Price (Liverpool) were largely based within close proximity of the town of manufacture, and thus had personal contact with the maker. The way in which several of these firms exited the manufacturing industry to become agents shows that, far from being failures by not increasing the size of their business, these firms can be viewed as both pioneering and adaptable and can be used as an example supporting the findings of newer economic historians such as Rose and Colli who argue that small businesses were important in driving innovation.⁴⁸ Firms such as Newton and Bennett, who manufactured the S.C.A.T. car in Manchester, continued as successful motor agents into the 1920s. Similarly firms such as William Lea of Liverpool produced the “Liver” car for a short period but was also a successful agent for a decade longer.⁴⁹ The adaptability of these firms also offers a different perspective from older economic theories such as Lazonick who viewed personal capitalism as a barrier to innovation; as a single enthusiast engineer, many of these ventures into motor production were not constrained by having to convince directors or shareholders.⁵⁰

So far, we have focused on cycle traders. However, firms came from a variety of backgrounds that belies the region’s reputation for textiles or the heavy industries that supported the staple trade. In both the nineteenth and early twentieth centuries, Manchester is often referred to as “Cottonopolis”, the world centre for the textile trade. Its reputation for textiles and related heavy engineering has often led it to be dismissed as a centre for light or electrical engineering. For example, Lee suggests that the motor industry sprung up in Coventry, Birmingham and the South East because of the diversity of engineering skills in these areas.⁵¹ Saul also concurs arguing that the Midlands was better suited to the manufacture of cars due to the concentration of

⁴⁸ Colli, A., *The History of Family Business, 1850-2000* (Cambridge: Cambridge University Press, 2002) p.9; Rose, M B., “The Family Firm in British Business” in Kirby, M. W. and Rose, M. B. eds. *Business Enterprise in Modern Britain: From the Eighteenth to the Twentieth Century* (London: Routledge, 1994)

⁴⁹ The “Liver” car was produced around 1900, a surviving example can be found currently on display Museum of Liverpool – MMM.1998.25. The firm continued as agents until at 1911 when it went out of business *Yorkshire Post* 26/7/1911

⁵⁰ Hobsbawm, *Industry and Empire*, London, Pelican (1969) p.183; Lazonick, W., *Business Organisation and the Myth of the Market Economy* (Cambridge: Cambridge University Press, 1991)

⁵¹ Lee, *Regional Economic Growth* p.85

light industries, which most naturally led to motor manufacture.⁵² Manchester's alleged lack of relevant industries, coachworks, cycle industry and other light engineering companies is accepted too easily by automobile scholars. Both studies by the North-West's regional scholars and scholars from other disciplines show that the engineering industry in Manchester was much more diverse.

Hume attempted a nationwide overview of the engineering trade by comparing the census data of 1851 and 1911. The study provides a useful overview although the periods covered are a little away from our starting point of 1896. The 1851 data shows Manchester as one of four engineering nuclei, with over 10,000 engineers. Manchester was also one of three cities with over 500 engineers employed in the carriage trade, another important industry in relation to early motor manufacture. Oldham is also listed as a smaller centre for tool, engine and machine engineering. Hume then looks at comparative density levels of county employment in engineering. Lancashire shows 41-50 engineers employed per 1,000, which is a moderate density comparable with the three midland counties, of Staffordshire, Warwickshire and Worcestershire.⁵³ The national growth in engineering industries in the latter half of the nineteenth century led to a more diverse national picture, with the huge expansion in shipbuilding, railways and electrical and mechanical engineering. By 1911, the number of towns and cities with over 10,000 engineers rose from four to 23. In Lancashire, Bolton, Oldham, Salford, Manchester and Liverpool had over 10,000 engineers, showing a large increase in the North-West. Despite the assertion that Lancashire specialised in textile and other heavy machinery, the statistical analysis shows Manchester and Salford as two of the nine cities with over 1,000 electrical engineers.

Although Manchester's other industries receive comparatively little attention in regional studies, there is still much evidence of the importance of diversification during the mid to late Victorian era. Timmins noted the increasing diversity of Manchester's manufacturing in the late Victorian and early Edwardian period, relative to the slowing growth of the cotton industry.⁵⁴ Lancashire's diversity was masked by the relative size of the textile industry and its reputation as "Cottonopolis". Important aspects of the

⁵² Saul, "The Motor Industry in Britain to 1914" p.30

⁵³ Hume, "Engineering" p.136-7

⁵⁴ Timmins, *Made in Lancashire* pp.208-209

city's industry, growing especially during the latter half of the nineteenth and early twentieth centuries included locomotive manufacture, general engineering, electrical engineering, coach building, cycle manufacturing, household goods and foodstuffs and the automobile industry.⁵⁵

Many automobile manufacturing ventures actually originated from textile-related firms. Simpson and Bodman were financially supported by local textile manufacturer and calico printers Simpson and Godlee.⁵⁶ Dan Simpson, the son of a cotton manufacturer, showed an awareness of how motor transport could impact the cotton industry:

here in Lancashire, where, as a cotton spinner told us, 'the cost of carriage often meant profit or no profit,' there would be the ground for a great industry.⁵⁷

Horsfall and Bickham, a textile machinery manufacturer, started manufacturing motorcars in 1900. They diversified into motorcar production as a side project and engineering experiment.⁵⁸ Or as Norris and Lomax put it, "having some spare plant and room, they decided to make a few cars for friends."⁵⁹ Marshall and Co. (later Belsize), one of Manchester's largest manufacturers, also had origins in the textile industry. While scholars often attribute the firm's beginnings to the cycle industry,⁶⁰ closer examination shows that the firm began as T. E. Marshall and Co. in 1894, taking its name from a Thomas Edward Marshall which in the 1895 trade directory is listed as "Scientific Instrument makers", based in a workshop in the Springfield Works on Springfield Lane in Salford.⁶¹ The firm is also listed in these early years as machinists and makers of drosophore humidifiers, used in the textile industry to guard against fire.⁶² There was also Turner, Atherton and Co., who made electrical lifts and

⁵⁵ Timmins, *Made in Lancashire* pp.199-209

⁵⁶ *London Gazette* 8/4/1910 p.2441 On the winding up of Simpson and Bibby, William Simpson, Dan Simpson and Francis Godlee listed as the partners. Further evidence of the silent partners is Liverpool University Library Archives - D.311/9 letter to William Simpson from Alley

⁵⁷ *The Engineer* 18/6/1897

⁵⁸ *The Manchester Guardian*, 22/9/1958

⁵⁹ Lomax and Norris, *Early Days* p.23

⁶⁰ Saul, "The Motor Industry in Britain to 1914" p.26; Worthington-Williams, "The Belsize from Manchester" p. 29; George, *The Manchester Motor Industry 1900-1938* p. 6

⁶¹ Slater's 1895 p.371

⁶² *The London Gazette* 29 October 1895 p.5878

mechanical products for the hat industry whilst experimenting with motor vehicles.⁶³ Firms with many other backgrounds also took up motor manufacture in the North-West, notably the Lancashire Steam Motor Company which produced steam powered lawn mowers; Royce Ltd, electrical engineers; the Protector Lamp Company; Beyer, Peacock and Co, locomotive manufacturers; Musker Brothers, hydraulic and electric engineers; Walmsley and Co. of Preston, coachbuilders; and Thorton Motor Co., which had a background in camera manufacturing.

Why these firms and many others entered the industry is difficult to judge, especially as there are few sources which provide an insight into the motives of early motor manufacturers. One of few personal accounts comes from Dan Simpson in his letter to *The Engineer*,⁶⁴ motivated by the imaginary that the motor vehicle can provide a new business model that can improve the cheaper transport of goods, specifically in the case of the prosperity of the cotton trade but also more generally. Unfortunately no other examples of direct reasoning for entering the motor industry have been found, but it seems as though there were several firms and individuals who, at the other end of the scale from Simpson, started making a few cars for friends, during a slack phase of business. Evans suggests Royce began to produce motorcars after getting involved in motoring, tinkering with and improving both his De Dion quadricycle and a Decauville car, which broke down after delivery. He then stripped the car down and rebuilt it with improvements, preceding his decision to manufacture his first three vehicles.⁶⁵ Belief in the future of automobilism and personal engineering and recreational curiosity are perhaps the better explanations for manufacturing attempts, especially as the business of automobile manufacturing was not seen as profitable for many years. Harrison in his analysis of public floatation notes that the absence of public investment between 1897 and 1905 reflected the lack of demand and the lack of profitability in the industry.⁶⁶ This is also demonstrated by contemporary opinion: Claremont, Royce's business partner, was opposed to entering the motor industry. Described as cautious in business, he is thought to have believed that motorcar production was irresponsible to shareholders; he even advised a young apprentice to

⁶³ *Manchester Guardian* 5/2/1901; 18/3/1903; 6/1/1913

⁶⁴ *The Engineer* 18/6/1897 p.625 part quoted at the beginning of chapter 2

⁶⁵ Evans *In the beginning* p.127

⁶⁶ Harrison "Joint-Stock Company Flotation" pp.167-169

leave and join Glover's, a firm for which Claremont was also a Director.⁶⁷ John Norris describes Cockshoot's entry into the motor industry in 1902,

There was, in fact, a sharp difference of opinion between the Directors, which persisted for many years.⁶⁸

He continued,

I remember my brother's own tough fight with his co-directors on Cockshoot's board to persuade them to take the trade seriously.⁶⁹

And yet paradoxically hundreds of firms and individuals were manufacturing or assembling vehicles.

The exit and survival of firms to 1914

Statistical analysis, both regionally and nationally, shows that most firms that entered the industry between 1896 and 1905 did not survive for long.⁷⁰ Between 1906 and 1914 there were 14 entrants in the North-West but 27 exits. Economic historians point towards an economic slump in 1907 and 1908 which saw a decline in demand for motorcars and the price competition from Ford who came to dominate the market in the years leading up to the First World War.⁷¹ Economic historians used "exits" to describe a firm ceasing to manufacture. However, high level statistical analysis of these "exits" does not take into account why or how firms exited the manufacturing industry. It is assumed therefore that exits were failures, which was not always the case. Exploring the survival of firms highlights factors for success which included the level of commitment to the industry; the level of experience gained; the access to investment; and the development of agency networks and relationships between customers, agents and manufacturers, whether a small or a large business.

⁶⁷ Evans, *In the beginning* pp.134-135

⁶⁸ Science and Industry Museum Archives - Norris's short typed history on the Deansgate "Arches" – YMS 0197/3/3/2

⁶⁹ Science and Industry Museum Archives - YMS 0197/8/5/9

⁷⁰ Saul "The Motor Industry in Britain to 1914" p.23; Foreman-Peck, Bowden and McKinley, *The British Motor Industry* p.13

⁷¹ Foreman-Peck, Bowden and McKinley, *The British Motor Industry* pp.12-13; Church, *The rise and decline of the British motor industry* pp.4-5; Saul, "The Motor Industry in Britain to 1914"

However as the industry evolved other aspects rose in importance as well. The made-to-order basis of motorcar sales was changing. This former approach required little investment and subsequently came with fairly low risk, as it marked a diversification of production, an approach that Horsfall and Bickham, for example were comfortable with, and an approach that was to be expected from specialist and high-cost, high quality manufacturers like Rolls-Royce. However Ford agents advertised immediate delivery in part thanks to the way in which Ford dealt with their agents, who would go to the assembly plant to pick up vehicles as and when they needed them, an approach that differed from other manufacturers, who set monthly delivery quotas.⁷² As the popularity of motoring grew, so did the volume of orders from agents and customers, which saw more ambitious and committed motor manufacturers expanding production and requiring capital investment. Without this, orders could be missed, and advantages lost. While pleasure and commercial motoring numbers were increasing steadily, it was in public motoring (private hire) that there was a particular demand boom. Adeney notes, for example, that in London in 1904 there was one motor-cab, compared to 585 horse-drawn, while in 1908 there were 21 horse-drawn cabs compared to 1,715 motorised.⁷³ There were relatively few companies, if any, that could successfully fulfil the lucrative demand for motorised taxis on the streets of Britain's cities during this period. These orders were particularly valuable; not only were they in bulk, but once made, it was advantageous for the operating company to continue to use the same supplier due to the non-standard nature of spare parts. Indeed in 1910 taxicabs accounted for nearly half of Napier's production. The newly enlarged Belsize Motor Company was also able to take advantage and the taxi side of the business grew especially rapidly; there are several articles in *The Commercial Motor* up to 1914 with testimonials, records of purchases and uses of Belsize taxis. The taxi was so popular that the Annual General Meeting in November 1911 noted they were supplying more taxis to Birmingham than any other manufacturer.⁷⁴ The company grew a reputation for good taxis and in reply to numerous enquiries as to which car a cab driver should buy, *The Commercial Motor* included Belsize among the

⁷² For example Ballymena and District agents Moore Bros. advertised immediate delivery. *Ballymena Observer* 6/2/1914; Riley, Lilleker and Tuckett, *The English Model T Ford* pp.123-124

⁷³ Adeney, *The Motor Makers* p.70

⁷⁴ Manchester Courier 17/11/1911

few companies recommended.⁷⁵ The boom period for motor taxis came at a time when there was a private motor sales slump in 1907 and 1908 and was an opportunity to take advantage of a relatively slack period.

The change in structure of the sales, orders and demand for taxis affected the exit of Horsfall and Bickham in 1908. It is estimated that the firm produced around 2,000 vehicles by the time they ceased production in 1909.⁷⁶ Yet they went out of the automobile industry because they had too many orders, rather than too few. Orders increased to such a point that they could not complete them, leaving the company with a choice to seek investment to commit fully to the automobile sector or focus on their traditional manufacturing products. This is typified by the rejection of a massive order for 2,000 taxi cabs for use in London that led to the resignation of the head of sales Mr Cranham.⁷⁷ The directors decided to stick with textile machinery and gave up automobile manufacture.⁷⁸ Part of this decision might have been the “hobby” attitude of the firm’s manufacturing process. Even in 1908 they only made cars to order, rather than producing a stock of models.⁷⁹ This attitude was more suited to the earlier period than to the batch production methods that many firms were using. As we see in other cases it was sometimes the enthusiasm of certain individuals of a firm’s management, rather than financial difficulties, which led to a firm’s exit from the industry.

One of the key trends identified in entries and exits was the lower chance of survival for firms starting after 1900,⁸⁰ the suggestion being that a history of experimentation and the experience that came with it was a valuable asset in the competitive market. Often the value of the experience came in the form of the sale of designs or in the hiring of experienced staff. Simpson and Bibby (formerly Simpson and Bodman) sold their designs for £25,000 to large engineering firm Alley and Maclellan in a profitable royalty deal that lasted for several years.⁸¹ Walter Bodman went to work for the

⁷⁵ For example a Welsh man looking to buy a taxi cab for private hire is recommended to get in touch with Belsize, Argyll or Straker-Squire, *The Commercial Motor* 9/12/1909

⁷⁶ George, *The Manchester Motor Industry 1900-1938* p.5

⁷⁷ Lomax and Norris, *Early Days* p.24

⁷⁸ *The Manchester Guardian*, 22/9/1958

⁷⁹ *Manchester Guardian* 16/10/1908

⁸⁰ Saul (1962) p.23; Foreman-Peck, Bowden and McKinley (1995) pp.12-13

⁸¹ University of Liverpool Library Archive, Liverpool, D.311/9, letter to William Simpson from Alley, 22/8/1905

Milwaukee Automobile Company in 1900, after the firm had come to Lancashire to trial the Simpson and Bodman system for production in the US. James Bibby, the later partner, was offered the highest paid position at Wolseley by Herbert Austin in 1903 to design commercial vehicles for the firm; he stayed there until Austin left in 1905.⁸² The Musker Brothers, joint owners of C. and A. Musker Ltd, Liverpool hydraulic engineers, produced products like hydraulic lifts and presses. The company also produced steam wagons, and were involved with the LSPTA, present at the first meeting in 1896.⁸³ They were also participants in the Liverpool Heavy Traffic Trials of 1899 and 1901. However in 1905 they sold the steam waggon side of the business to traction engine manufacturers Savage Brothers of Kings Lynn.⁸⁴ Paying for business experience and design was to continue into the interwar period as small but experienced firms and designers sold their businesses. The Bell Brothers sold their car designs to the Co-operative Wholesale Society in 1919 who were looking to enter the motor industry in the period of post-First World War demand. There was also a merger of the motor department of Coulthard and Co. and the Lancashire Steam Motor Company (LSMC), who became Leyland Motors in the same year. The two firms had been linked, with Coulthard and Co. providing funding for LSMC early on.⁸⁵ After the merger there was a significant extension of the Leyland works to increase output from 6 vehicles a month to 3 vehicles a week.⁸⁶ Thus we cannot necessarily label those who exited the industry through merger or through the sale of the business as failures, but as recognition of the strengths and weaknesses of individual experience.

One of the important debates for this period of the motor industry was over the risk and success of public flotation, used to get quick capital for the expansion of works and production. This was less of a risk for firms like Belsize and Leyland who were able to expand on existing sites; this was not possible for firms like Rolls-Royce whose workshop space was limited in a heavily built up area. The flotation put forward by Rolls-Royce for a new factory in Derby, therefore, was a high risk move, while Belsize and Leyland were able to offer small sizes of public shares as and when they needed

⁸² University of Liverpool Library Archive, Liverpool , D.311/7, letter from Herbert Austin to James Bibby, 18/2/1903

⁸³ *The Automotor and Horseless Journal* Nov 1896 p.43

⁸⁴ Clark, R. H., *The Development of the English Steam Wagon* (Norwich: Goose and Son, 1962) p.52

⁸⁵ <http://www.madeinpreston.co.uk/Road/leylandinfo.html>

⁸⁶ *Lancashire Evening Post* 23/4/1907

the capital. Big investment in the British industry as a whole came after 1904.⁸⁷

However in Manchester investment in commercial motoring came earlier, showing a particular need or confidence in this sector of the automobile industry. Despite this, nearly all first public flotations made by companies based in the North-West - Rolls-Royce, Belsize and Foden - were undersubscribed. Later, however, subscriptions were more successful as firms had established a clearer profitability that was much more attractive to investors. This was particularly the case for Belsize who offered several modest numbers of shares, released when investment was needed. They were successful in raising subscriptions, for £20,000 in 1911 and £50,000 in 1913.⁸⁸ This adds to our understanding of venture capital in the motorcar industry which Harrison showed was generally available for firms with a good record, contrary to Mitchie who argued generally that capital was easily available.⁸⁹

Ford marketed their car as universal and advocated against the purchase of the large range of “experimental” cars and motorcycles on offer. However in our examination of small manufacturers we have seen that they were actually fairly resilient during this period with a large range of manufacturers’ cars still being registered towards the end of this period of study. Yet as firms grew and the motoring public became larger, customers were able to better know the relative reputations of motorcycles, cars and commercial vehicles. This factor is highlighted in the *Manchester Courier* in 1913:

The Lancashire man and Northerner generally is a discriminating person who will buy only cars that are well tried and proven. He will have none of experimental cars, or those he knows not of... The better a car is known and the more there are of them to be seen running about, the better it will command sales in the Manchester district and Lancashire generally.⁹⁰

This was a sign of things to come in the interwar period, where a large number of firms entered the motor manufacturing industry in an attempt to fill the demand for motor vehicles. However, regionally as well as nationally, most of these firms failed as they

⁸⁷ Harrison (1982) p.167

⁸⁸ *Manchester Courier* 17/11/1911; *Manchester Courier* 22/11/1915

⁸⁹ Michie, R. C., “Options, Concessions, Syndicates, and the Provision of Venture Capital” in *Business History*, Vol.23:2 (1981) pp.153-154; Harrison (1981) pp.184-185

⁹⁰ *Manchester Courier* 26/2/1913

had little experience, no established reputation, nor had they established agency networks or a clientele base.

Conclusion

This section has built on the exploration of how bicycle culture interacted with the origins of motoring in Chapter 1. Cyclists were susceptible to the automobile, and this section has shown how small cycle sellers and manufacturers were similarly susceptible to early experimental manufacture. Although Manchester's cycle industry was fairly insignificant compared to the much larger producers in the Midlands, many were quicker to adapt their bicycles to motorcycles to serve local customers. It is difficult to analyse why there were so many manufacturers in the early period of the automobile as there are relatively few personal insights. However the number of entries, in a new, competitive industry suggests the power of the sociotechnical imaginaries surrounding the future of automobile technology, explored in Chapter 2. In this period there was little separation between the user and the designer, with many manufacturers being pioneering early users.

3.4 - Coachbuilders, dealers and the importance of the automobile manufacturer, sales, customer relationship

Considering that car dealerships have become the customers' first point of contact for purchases, repairs and servicing it is surprising how little the relationship between manufacturers, dealers and customers features in both automobile scholarship and science and technology studies. Pinch has identified salespeople and marketing as "the true "missing masses" of technology studies" due to their role as mediators between users and manufacturers:

they also are often the first to hear about deficiencies in current use, how a technology can be improved, and what works and what doesn't. Such information is often passed onto designers and manufacturers.⁹¹

In his study of the sale of electric synthesisers, it was the salesman and the salesman's interaction with potential users, and not the designer, which influenced the direction of technological innovation. This section therefore looks to explore the role of the agent and dealer in the automobile industry. It argues that the dealer played an important role in linking the user and customer with the manufacturer which was important for developing products that both the customer wanted and the agent could easily sell. Analysis also shows the importance of lasting dealer-manufacturer relationships in several areas, most notably in after-sale customer service, pioneered by Ford and its dealers in the pre-World War One era and from then on, an important aspect of car sales that provided confidence to existing, and potential consumers. Ford also showed the importance of a nationwide coverage of dealerships, which coincided with the end of many experimental, or small automobile manufacturers. These networks of hundreds of dealers had to be maintained, and we see in our case study of Belsize the impact that the loss of these dealers could have on business. We also see evidence of agents adapting quickly to the changing attitudes and needs of the customer, further demonstrating the importance of them as mediators between designers and users.

⁹¹ Pinch (2003) p.248

The way in which dealerships worked changed very little over the period of study. Dealers would agree season-long deals with manufacturers, often for a specific number of vehicles. These agreements included territorial areas which agents would be solely responsible for. As the industry developed, territorial agencies also included the responsibility for sub-agencies in the given area. Due to the regional, often local, nature of early car agencies the customer base was small, but this meant that agents had specialist local knowledge of regional conditions and customers. Dealers often came to the motor industry from established trades such as coachbuilding or cycle agencies, and had their own loyal clientele, which was important for early manufacturers as it offered them a ready outlet for sales. As we saw in Chapter 1, cyclists and coach owners were important early user groups.

This section will explore the importance of dealership through the archive material of two Manchester-based firms. The first is Manchester coachbuilder Joseph Cockshoot and Co., whose extensive archival collection offers a unique perspective on the advent of the motorcar and the adaptation and importance of coachbuilders as agents. The second firm is Quicks, an important interwar local dealership that sold almost exclusively for Ford. This section will also look at a few important local manufacturers and explore their relationship with agencies; these include Ford, whose relationship with agencies was pioneering; and a case study for the interwar period of a Manchester manufacturer Belsize, and a Midlands-based producer Austin.

Ford: price, technology, marketing and dealerships

Ford had a long history in the UK before establishing an assembly plant in Manchester in 1911. They began importing cars in 1903 through the American Motor Car Agency, later the Central Motor Car Company, based in London.⁹² Crucial to the sale of UK Fords from this beginning was Percival Perry (1878 -1956), who would later be instrumental in Ford's success, both in persuading Ford to invest in a British assembly plant and in steering the British operation as managing director. The Ford Motor Company of England was formed in 1910 and from this point dealership operations expanded. In 1909 to 1910, 91 percent of sales were made through Perry's dealership

⁹² Riley, Lilleker and Tuckett (2011) pp.3-4

network, with sales rising to 570 for 1910.⁹³ This justified the opening of the Trafford Park assembly plant. Ford moved to Manchester for a number of reasons, some of which are outlined by the *Ford Times*, which noted the proximity to the Manchester Ship Canal for ease of import, good rail links and unrivalled access to labour, with the North-West as the centre of the cotton trade.⁹⁴ Parts were imported from America, and motorcar bodies were built in Manchester for the British market. The growth of sales was rapid, more than doubling every year to 1913.⁹⁵ The Model T Ford price varied depending on the body, but a runabout model cost as little as £135 in 1912 and 1913.⁹⁶ This compared to competing cars such as the Belsize 10/12 H.P. which sold at £225 in 1912.⁹⁷ However, the Ford was still over double the price of a new motorcycle: a Triumph in 1912 could be bought for £55 new.⁹⁸

Economic automobile scholars explain Ford's dominance by 1914 by focusing on Ford's ability to produce much cheaper vehicles than native competitors.⁹⁹ However, analysis of Ford often stops with the manufacturing process. In Chapter 1 we looked at how popular perception played a part in the success or failure of a motor manufacturer. Being cheaper than British competitors did not necessarily lead to better performance, and it has been argued that the cheapest cars were often unpopular because of their low price.¹⁰⁰ As well as price, the sophistication of their dealership network and the emphasis on post-purchase customer service had a large impact on Ford's competitive advantage. Ford developed a level of service and range of dealerships that was well beyond other motor manufacturers during the Edwardian period. While other manufacturers might have dealerships in the major cities, Ford had expanded to as many as 272 dealers nationally by 1912, after only the first full year of production at Trafford Park, offering national coverage, as demonstrated in Figure 42. One of the important aspects of this relationship was Perry's understanding of the British sales system which saw dealers given exclusivity to specific regions, with sub-dealer contract

⁹³ Riley, Lilleker and Tuckett (2011) p.32

⁹⁴ *Ford Times* 1911 Vol.4, in McIntosh (1995) p.66

⁹⁵ Riley, Lilleker and Tuckett (2011) p.56

⁹⁶ Riley, Lilleker and Tuckett (2011) p.57

⁹⁷ *Dublin Daily Express* 9/11/1912

⁹⁸ *Derbyshire Courier* 9/3/1912

⁹⁹ Church (1994) pp.8-9; Foreman-Peck, Bowden and McKinlay (1995) p.13

¹⁰⁰ O'Connell (1998) pp.22-24 highlights how the £100 Morris Minor was s

rights. Percival Perry noted in his memoirs that finding the best dealers in regions was a key factor in his sales strategy.¹⁰¹ Once a good dealer had been found they were encouraged to market the car in innovative ways that were often specific to the region they were in. In Manchester the main dealers were Lookers and Co. who used their links with the *Manchester Courier's* motoring journalist J. T. Ward, to get a review of the Model T published in 1911. He was:

agreeably surprised at the steady running of this car... It also possesses speed and extreme flexibility.... At £190 it is really remarkable value, and our British makers will have to look to their laurels.¹⁰²

The most famous dealer-led publicity stunt however, was undertaken by Scottish dealer Henry Alexander, who used the Model T to scale and descend Ben Nevis in 1911.¹⁰³ The aim was both to promote the abilities of the Model T and to combat the American prejudice being promoted by British manufacturers.¹⁰⁴ Aspray, studying the history of car buying in America, noted that Ford's success in the US was also to do with its relationship with dealers. This included a greater level of instructions than other motor car manufacturers, such as walking sales, which was certainly effective for local Ford dealer Quicks who employed several walking salesmen in the interwar era.¹⁰⁵ Ford was the first manufacturer to release its own dealer-based magazine, *The Ford Times*, a free publication launched in June 1912. It was distributed by dealers along with owner aids such as the *Ford Owner's Manual*, also published in 1912.¹⁰⁶ This nationwide, or indeed worldwide, aspect to the sale of cars marks a distinct change from the often local market served by the large number of small manufacturing firms described above.

One of the benefits of the wide dealership network was the widespread availability of spares and repair specialists. This was particularly important in this period when breakdowns and the replacement of parts was a regular part of the motoring

¹⁰¹ Riley, Lilleker and Tuckett (2011) p.124

¹⁰² *Manchester Courier* 4/10/1911

¹⁰³ Riley, Lilleker and Tuckett (2011) pp.37-39

¹⁰⁴ Riley, Lilleker and Tuckett (2011) pp.37

¹⁰⁵ Aspra

y (2011) pp.25-26

¹⁰⁶ Riley, Lilleker and Tuckett (2011) pp.58-69

experience.¹⁰⁷ In the early experimental period, with hundreds of manufacturers, there was much more uncertainty and difficulty involved in receiving support for repairs, which we have suggested might make customers more inclined to buy locally. As agency networks improved and advertising started to emphasise the supplies of spares and where they could be bought, the importance of being able to get to the manufacturer for such support lessened. It was much easier for these smaller producers to become agents for manufacturers, rather than manufacturers themselves, as we see several doing during this period.

Ford used their repair and supply network to great effect in marketing campaigns. An advert from 1912 lists the chief Ford dealers around the country who “carry a complete stock of SPARE PARTS.”¹⁰⁸ Ford also issued complete spare part catalogues.¹⁰⁹ An advert by The Western Counties Automobile Company noted that the complete stocking of parts meant owners “avoiding the delay of sending to London, or perhaps abroad, as with some cars, for the parts wanted.” The advert finished with the snappy line, “You see them wherever you go, and they go wherever you see them”, one of Ford’s much used slogans during this period.¹¹⁰ The wide distribution of Ford dealerships and repairers would have appealed to those who enjoyed touring, or holidaying in their cars, with repairs quickly available across the country. This national coverage is emphasised by the Ford map of dealers seen in the “Autumn Touring 1912 *Ford Service Map*” in Figure 42. It shows a total of 201 dealers, of which 32 held a full stock of spares.¹¹¹ While Ford sold a car that other companies struggled to compete with in terms of value, small firms could not support their customers after purchase in the same manner as Ford. This issue was still an important factor into the interwar period, where demand for individual model repairs became important. Firms like Morris learnt from the Ford model, with regional dealers such as Cockshoot in Manchester opening specialist Morris repair depots, separate to their salesrooms and normal workshops that Morris owners could take their cars to.¹¹² These services and the security it offered potential buyers over other experimental

¹⁰⁷ Mom (2015) pp.62-63

¹⁰⁸ *Autocar* 15/5/1912

¹⁰⁹ *Manchester Courier* 20/8/1913

¹¹⁰ *Bath Chronicle and Weekly Gazette* 27/7/1911

¹¹¹ Riley, Lilleker and Tuckett (2011) Appendix 6

¹¹² YMS 0197/3/4/1

manufacturers led Ford dealers such as Stirling-based agents Menzies Brothers to argue the following in their advertising:

Don't experiment – buy a Ford... there is no element of risk in the purchase of one.

Satisfactory service rendered to users in all parts of the world accounts for increasing popularity.¹¹³

Dealers also looked to tackle the prejudice against American cars. In film footage of the Ford's climb of Ben Nevis in 1911, the car drove through Fort William with the US flag waving, demonstrating the prowess of this foreign vehicle.¹¹⁴ In this regard, as well as in other publicity stunts, Ford was able to combat the prevailing prejudice that American cars were cheap and poorly built.

¹¹³ *Falkirk Herald* 15/5/1912

¹¹⁴ Footage of the Ben Nevis climb, descent and parade. Parade with flag 5:30-6:30 Accessed 11/4/2018 <https://www.youtube.com/watch?v=jaNgYhvmtzA>



Figure 42 - "Ford Service Map", *The Ford Times* (September 1912)

In terms of wider economic debates, one could argue that Ford's wide dealership network represented just another aspect of the benefits of corporate capitalism, to go alongside the reduced price of the Model T, thanks to the import of mass produced parts from America. However, the emphasis on dealerships and sales in the UK largely pre-dates the investment that came with the formation of the Ford Motor Company

(England) Ltd. in 1910.¹¹⁵ The groundwork for this network was made by Percival Perry, who secured a network of dealerships for Ford before persuading the American company to invest in the UK. Perry had experience dealing with customers and their needs and without investment Perry had managed to secure key dealerships that covered the UK, including dealerships in Aberdeen, Southampton, Edinburgh, Dublin, Yeovil, Bristol, Leeds, Suffolk and Newcastle.¹¹⁶ Before Ford's investment Perry also worked to overcome anti-American prejudice which caused Ford to perform badly in the UK from 1903.¹¹⁷ Perry described the "impregnable prejudice" of the public when it came to regarding the cheap American car.¹¹⁸ Thus the investment and the formation of the company in 1910 coupled Perry's knowledge of the British market, the British customer, its sales and its agencies, with access to the resources of one of America's biggest companies.

Scholars often consider Ford's arrival, with its plant at Trafford Park, and the introduction of American production methods, the use of unskilled and semi-skilled labour, and capital resources as significant to the firm's ability to sell cheaper cars and thus gain dominance of the British market.¹¹⁹ However, McIntosh argues that the emphasis on production line technology is misplaced. A moving assembly line, for example, was only introduced in 1914, well after market dominance had been established and the bodies especially were not standard, but made specifically for the British market, as Ford and its dealers adapted to British users.¹²⁰ Between 1911 and 1914 Ford was assembling cars in batches, in a similar manner to British producers, as can be seen in Figure 43. Similarly they were using unionised skilled labourers from 1911 as evidenced by the six-month tinsmiths and joiners' strike in 1913/1914, although Ford were successful in virtually ousting the unions at this point.¹²¹ Ford's rise in the UK can be traced back before the assembly plant, and any technological or labour savings to do with the manufacturing process in the UK. Sales had tripled between 1910 and 1911 with 570 and 1,485 sales respectively; and yet Ford only

¹¹⁵ Riley, Lilleker and Tuckett, *The English Model T Ford* p.25

¹¹⁶ Riley, Lilleker and Tuckett, *The English Model T Ford* pp.13-14

¹¹⁷ McIntosh, I., *Ford at Trafford Park*, PhD Thesis, The University of Manchester (1991) p.103

¹¹⁸ Adeney, *The Motor Makers* p.64

¹¹⁹ Georgano, Baldwin, Clausager and Wood (1995) pp.63-65; Church, *The rise and decline of the British motor industry* p.8

¹²⁰ McIntosh, *Ford at Trafford Park* p.12

¹²¹ Riley, Lilleker and Tuckett, *The English Model T Ford* pp.70-71

moved to Trafford Park at the end of 1911. If anything should be emphasised in regard to production it is the lack of an import tariff, meaning that imported American parts, produced en masse in the US, could compete unhindered by trade barriers until the First World War.



Figure 43 - Ford chassis assembly room 1913 - Source Riley, Lilleker and Tuckett (2011) p.54

McIntosh and Riley et al draw attention to the way in which the American Model T was adapted specifically for the British market. There was, for example, an objection to American coachwork, so the Ford was distinctively British in design and material.¹²² There were many differences between the American and British models including different windscreen designs, doors, mudguards and an English horn.¹²³ McIntosh also argues that there was an emphasis on continually improving the production process.¹²⁴ This is evident when we look at the memoirs of Herbert Morton, who worked for the firm during the interwar period. He worked on the shop floor and put a suggestion for axle assembly improvement in the firm's suggestion box in 1918. He was given the go ahead to give it a try, and when it was successful he was given a pay rise. He tried this

¹²² McIntosh, *Ford at Trafford Park* p.120

¹²³ Riley, Lilleker and Tuckett (1911) pp.57-67

¹²⁴ McIntosh, *Ford at Trafford Park* p.126

again a few more times and eventually he was offered a job as the firm's "improvement finder" and was given his own assistant.¹²⁵

It is clear from the analysis of Ford UK's strategy that cheap American parts and cars was not a guarantee for successful penetration of the British market. A combination of factors made for the success of Ford in Britain, where other American producers failed during this period to penetrate the British market with any significance. American producers in Britain also struggled after the First World War despite the continued price differences. Similarly Ford's performance in the interwar period shows how cheaper prices and efficient production were not enough to maintain their market lead. Culturally there was a "buy native" prejudice that was important in British consumerism, which developed further in the interwar period, as we have explored in Chapter 1. Important to Ford's success was its British adaptation to suit British users, its use of marketing initiatives, and the way in which it won over British car dealers and then the British public. Ford was able through its price to begin to offer a bridge between the motorcycle and the motorcar, by being affordable for the "modest motorist", and providing the comfort associated with the richer motorist. Only in the interwar years were firms like Austin able to aim for this market with the sale of cars like the Austin Seven. Behind this was the synergy between Ford's American scale production, British free trade policy and the good knowledge of the British market brought by the management of Perry.

Cockshoot: a case study of a coachbuilder entering the motor industry

The focus on the automobile has led to a lack of exploration of the horse-drawn vehicle and its supporting trades, such as the coachbuilder or the wheelwright. More recently, scholars such as Kinney (2004) for the USA, and Tjong Tjing Tai (2015) for the Netherlands, have sought to address the imbalance by exploring how coachbuilders adapted to the arrival of the automobile.¹²⁶ They highlight the great disparity in the speed of coachbuilders to transition, and the contradiction that coachbuilders were seen as natural builders of the new horseless-carriage with their woodworking skills,

¹²⁵ Chetham Library Archives, Herbert Morton Collection 2.11

¹²⁶ There have been little research on the UK carriage trade, however there are studies on other countries including Kinney, *The Carriage Trade* for the USA and Sue-Yen Tjong Tjin Tai, "Building Carriage, Wagon and Motor Vehicle Bodies"

yet unsuited to the new demands of metalworking and mechanical engineering. Also the emergence of the automobile variably affected the trade depending on the types of coachwork. High-class coachbuilders were affected much quicker than wagonbuilders. The archive material relating to Cockshoot offers a case study of technological adaptation as the firm embraced the automobile. They were successful in this transition largely because they were in touch with their clientele's needs as well as the changing experiences of coachbuilders nationally and internationally, well outside its customer base. While we see the firm hold onto their coachbuilding traditions well into the interwar period, the firm quickly began to make most of its money as motorcar agents, an area they were completely unfamiliar with at the turn of the twentieth century. The quick and relatively seamless progression of this small-to-medium-sized family firm can be used as an example supporting the findings of more recent economic scholarship by historians such as Colli who argue that family-run, small business was often innovative, international in awareness and quick to adapt to technological change.¹²⁷ This is contrary to the perspective of older economic theorists such as Hobsbawm who argued generational ownership led to less enterprising businesses; or Lazonick who viewed personal capitalism as a barrier to innovation.¹²⁸ This section argues that the firm's closeness to a core customer base meant they were very much in touch with how and when their customers were using automobiles and this close customer relationship led them to be particular about which manufacturers they worked with.

Business listings in local trade directories allow for an analysis of the regional motor and carriage trade in the first few decades of the twentieth century. Figure 44 shows relatively little difference between 1901 and 1911, notable only for a small number of motorcar garages and agencies emerging, with only a small drop in associated horse and carriage trade businesses; however between 1911 and 1921, and 1921 and 1931, there are appreciable differences, especially in the rise of motorcar garages and the decline in wheelwrights. However, the number of carriage and coachbuilders stayed roughly the same throughout the period. Many coachbuilders like Cockshoot became

¹²⁷ Colli, A., *The History of Family Business, 1850-2000* (Cambridge: Cambridge University Press, 2002)

¹²⁸ Hobsbawm, E. J., *Industry and Empire* (London: Pelican, 1969) p.183; Lazonick, W., *Business Organisation and the Myth of the Market Economy* (Cambridge: Cambridge University Press, 1991)

motor body builders, agents and garage proprietors as the automobile rose to ubiquity and horse-drawn vehicles declined into obscurity.

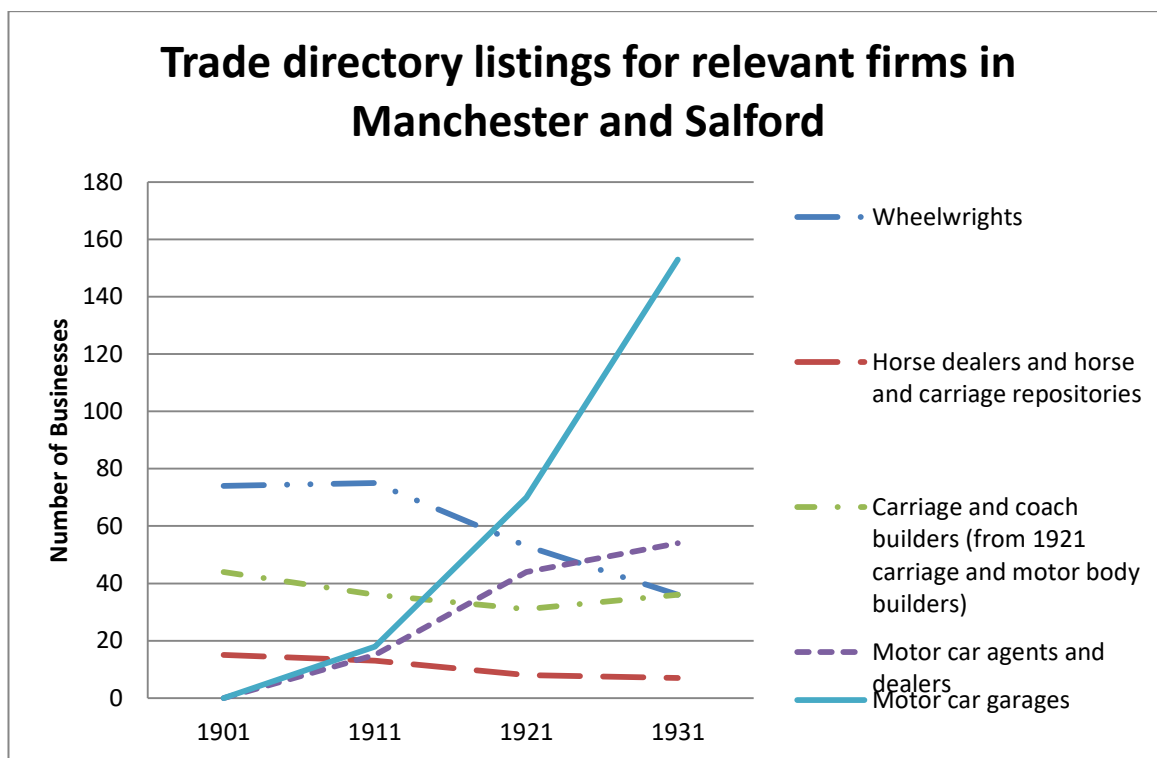


Figure 44 - Data collected from the *Slater's Manchester and Salford Trade Directory*, 1901, 1911, 1921 and 1931

Introducing Joseph Cockshoot and Company

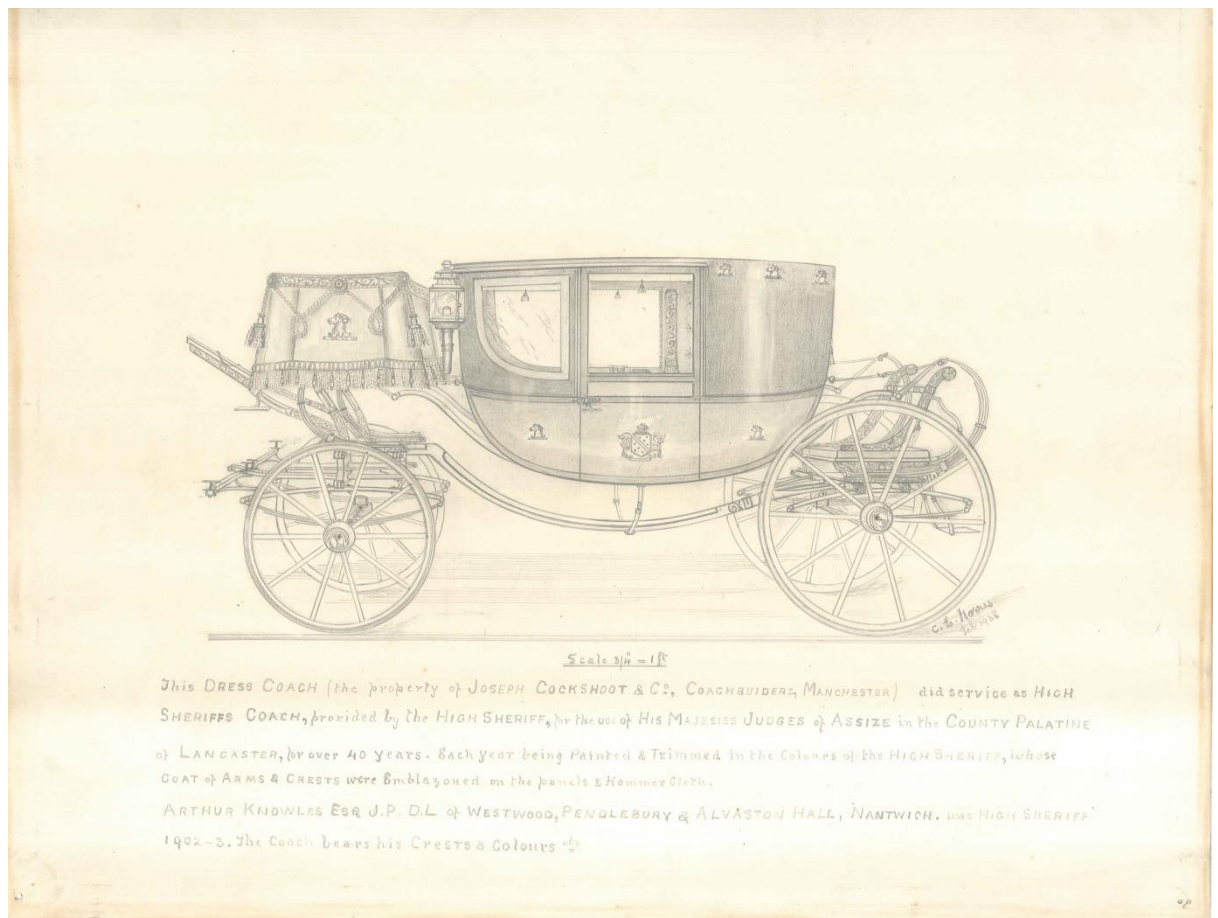


Figure 45 – Drawing of the High Sherriff of Lancashire’s coach built by Cockshoot in 1902 – Science and Industry Museum Archive - YMS 0197/1/1/9

Joseph Cockshoot set up as an independent coachbuilder in 1844 before forming a partnership with William Norris in 1851. By the twentieth century the firm had a long history of building quality carriages for Lancashire and Cheshire’s upper-classes, as well as selling second-hand carriages. Examples of the firm’s elegant and high quality work can be found in abundance in the company archives. They include the carriage (in Figure 45) which was commissioned by the High Sherriff of Lancashire in 1902. The firm also won numerous awards such as the Premier Gold Medal at the Paris Exhibition of 1878.

Cockshoot entered the motor industry between 1901 and 1902 by building a few motorcar bodies for clients, before opening a motor department in 1903.¹²⁹ By 1907 they had auctioned off their remaining stock of horse-drawn carriages and accessories and were wholly committed to the motor trade thereafter.¹³⁰ As motor body custom declined they expanded motorcar sales and repairs for which they were successful well into the latter half of the twentieth century. The business was bought in 1968 by Lex Garages Ltd. and by 1970, after 119 years, the Norris family ceased involvement in the management of the firm.¹³¹ In the following analysis we will explore the decision to set up the motor department and the firm's relationship with both customers and early motor manufacturers.

Cockshoot's entry into the motor industry

In Chapter 1 we looked at the link between carriage customers and early motoring and used as evidence the letter addressed to shareholders in 1902 which justified the opening of a Motor Department. They reasoned:

It has been evident for some time past that customers of the firm have been purchasing motorcars in addition to their carriages, and it requires no great amount of argument to show that if that be the case their carriages, used alternatively with motorcars, will last much longer than if they used carriages solely.¹³²

They then noted that although there was no change at the moment, there would be if the fortune of the motor industry continued to improve. Their research involved visiting coachbuilders in London, Paris and the provinces to see how they had been adapting to the new motor industry. As we demonstrated in Chapter 1, the ownership of an automobile was often in addition to carriages.

¹²⁹ A summary of the early history of the firm can be found in its centenary publication: Science and Industry Museum Archives – YMS 0197/9/1

¹³⁰ Science and Industry Museum Archives – YMS 0197/6/3 – Catalogue of sale by auction of Cockshoot's remaining carriage stock by Capes, Dunn and Co. 1909.

¹³¹ Science and Industry Museum Archives – YMS 0197/8/1/6 – Details of the Lex garage takeover

¹³² Science and Industry Museum Archives - YMS 0196/3/6

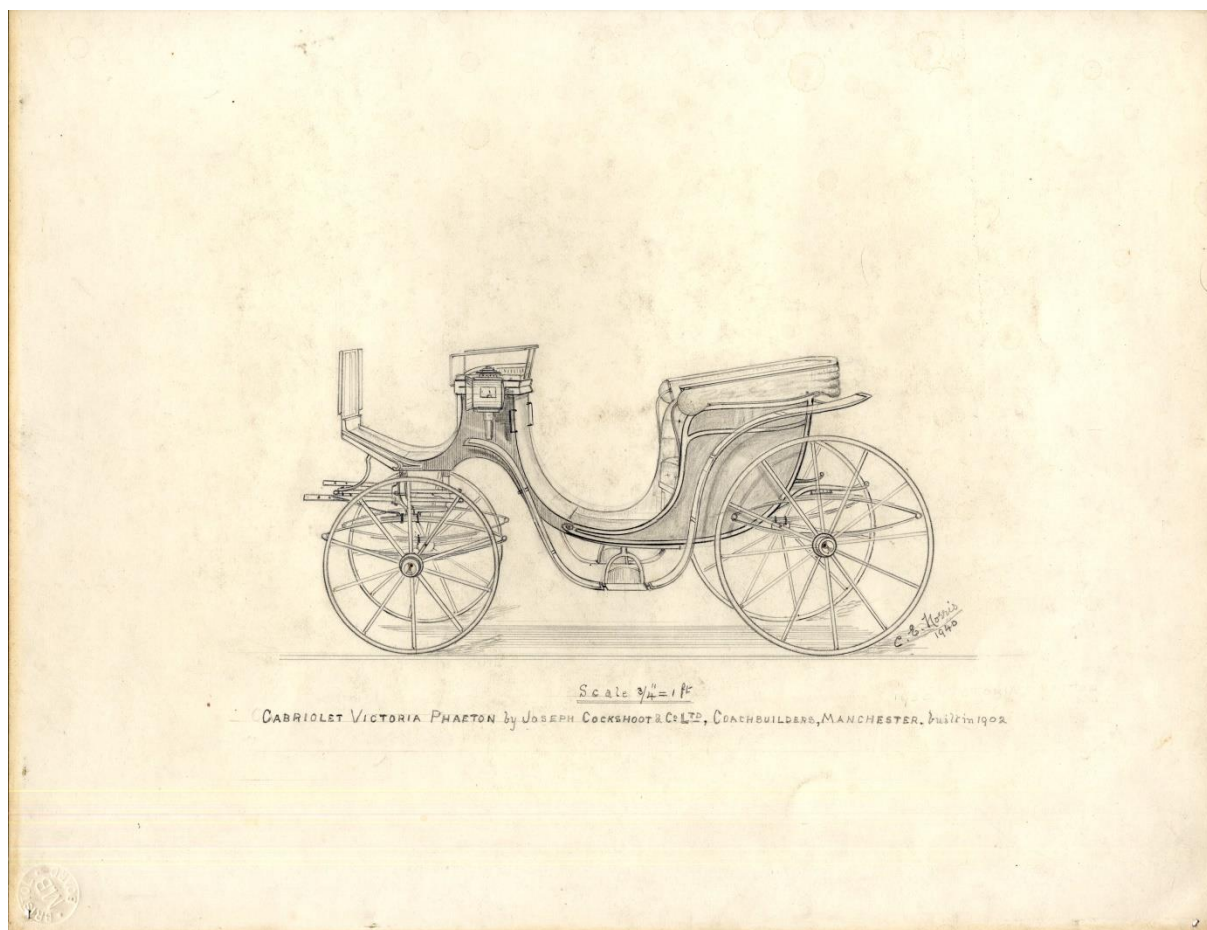


Figure 46 – Drawing of a Cabriolet Victoria Phaeton made in 1902. Carriage nomenclature was also used for automobile bodies - Science and Industry Museum Archives - YMS 0197/1/1/20

The decision to enter the motor industry shows bold leadership from the Norris family, whose second generation were largely responsible for running the business during this period. Despite this, the decision was challenged within the company. Two of the six directors, John Ainsworth and Ezra Miller, voted against entering the motoring industry.¹³³ Ezra Miller was a harness maker and therefore represented a specific skillset within the coachbuilding trade. This highlights that coachbuilding firms were a collection of many different crafts. Trimmers, coachbuilders, carpenters and painters would still have a role, whereas harness makers and wheelwrights might feel threatened by the new department.¹³⁴ This split is highlighted in the United Kingdom

¹³³ As noted in Science and Industry Museum Archives - YMS 0196/3/6

¹³⁴ Science and Industry Museum Archives - YMS 196/1/9/25 *The Story of a Centenary of Service to Travellers by Road* (1944) Unknown author

Society of Coachbuilders membership.¹³⁵ Roughly 33 percent of the workforce might be affected negatively, which would certainly explain the opposition within Cockshoot and more widely among other coachbuilders.

The venture was only one vote from not starting. The internal loggerhead is remembered in a note on the subject written in the 1950s, by former director John Norris, working for the company at the time.

There was, in fact, a sharp difference of opinion between the Directors, which persisted for many years.¹³⁶

He expands on this in other memoirs:

And again there was a tremendous amount of prejudice surrounding the motorcar and a serious maker found he not only had to break down this but also fight the vested interest.

I remember my brother's own tough fight with his co-directors on Cockshoot's board to persuade them to take the trade seriously.¹³⁷

However, this decision was viewed very differently by the company in later decades. The company's catalogue for 1924 announced:

it was but a natural development that the firm should take its place with the pioneers of the motor industry in this country.¹³⁸

This insight into the firm's dilemma is a rare opportunity to challenge the assumption that coachbuilders naturally adapted to the change brought about by the automobile. This adaptation and the changing views over time (one breaking down prejudice and fighting the vested interest, and later as a "natural" progression) show how social attitudes changed towards horse and automobile technologies over time. It also highlights the inadequacies of a technological determinist view of the automobile as a superior technology. It is assumed later on that the transition from horse to

¹³⁵ Lyddon D., *Craft Unionism and Industrial Change: a Study of the National Union of Vehicle Builders Until 1939* (University of Warwick: PhD thesis, 1897) p.73

¹³⁶ Science and Industry Museum Archives - Norris's short typed history on the Deansgate "Arches" – YMS 0197/3/3/2

¹³⁷ Science and Industry Museum Archives - YMS 0197/8/5/9

¹³⁸ Science and Industry Museum Archives - Catalogue for Wembley exhibition 1924, YMS 0197/6/2

automobile was “natural” and technologically determined, which belies the reality of the contemporary experience, which we have explored in Chapters 1 and 2. This entry period also highlights the problem with considering coachbuilders as a single trade, when in fact there were several that made up the industry, each with quite different roles and prejudices.

Early dealings (1902-10)

Miller might have been justified in his objections to the automobile trade. Cockshoot leased a garage on Deansgate, known as “The Arches”, and negotiated the agency for the Velox, the Rex, the Northern Runabout and the Stanley Steam Car, all of which were initially unsuccessful for Cockshoot and led to a loss for the new department in 1903 of £1,556 6s, which had to be offset by carriage trade profits.¹³⁹ The opening of the motor department in 1903 might have been viewed as visionary in hindsight, however it demonstrates how difficult and unnatural it was for a coachbuilder to open a garage and begin with motorcar agencies. Cockshoot lacked expertise among the staff already employed at the firm and relied on those in Manchester who did. For example Fred Settle was employed as chief mechanic. Mr Settle had been involved in one of Manchester’s first garage ventures, the Manchester Motor Car Corporation, and had at least three years’ experience as a motorcar mechanic.¹⁴⁰ With a good reputation as a coachbuilder, Cockshoot were well placed to sell motorcars to their clientele. However in the UK dealerships were almost always agreed with a territory arrangement, so picking the right car agency could be tricky, especially with no experience. In this respect the firm bought the business and the rights to the agency agreements of Manchester dealer F. Wilkinson and Co., who had already established agencies for the American Stanley Steam Car and the petrol-driven Northern Runabout.¹⁴¹ Like Settle, Wilkinson also had a history in the local industry. For several years previously he sold steam engine components and steam-powered

¹³⁹ Advert for these first appears in *The Autocar* 8/2/1903; Science and Industry Museum Archives – YMS 0161/1/3/8

¹⁴⁰ Science and Industry Museum Archives - YMS 0197/3/3/2 The Manchester Motor Car Corporation was formed in 1899 and was probably the first garage in Manchester *The Autocar* 18/2/1899

¹⁴¹ Science and Industry Museum Archives - YMS 0197/3/3/2

automobiles.¹⁴² To demonstrate the difficulty of selecting agencies we only need to examine the number of motorcar manufacturers at the time. The North-West alone had 20 automobile manufacturers, while estimates show there were around 200 automobile manufacturers in the UK, not counting all the foreign manufacturers.¹⁴³ Adapting to engineering and agency sales was not straightforward, a step that is often neglected. Automobile scholars such as Georgano and Foreman-Peck, Bowden and McKinley focus instead on coachbuilders' more natural transition to motorcar body production.¹⁴⁴ For example, Cockshoot had already been approached by several clients to fit motorcar bodies prior to 1903.¹⁴⁵

The initial poor performance did not deter the firm who soon established themselves with some more successful agencies and some regular motor body building work for local and international firms, including Renault, Rolls-Royce and Panhard. Crucially these relationships were longer lasting, suggesting both customer and agent satisfaction. Despite the opposition to entry into the motoring industry, Cockshoot ceased all involvement in the carriage trade when in October 1909 the remaining stock, including harnesses, whips etc. were put up for auction.¹⁴⁶ Although coachbuilders by tradition from then onwards, Cockshoot were solely engaged in the motor trade.

Despite Cockshoot's bold decision to enter the motor trade in late 1902, economically it was a difficult road to success. Indeed John Norris in his memoirs put a large emphasis on the firm's crucial relationship with Renault, both as agent and motorcar body builder.¹⁴⁷ To demonstrate how complex and contradictory this period was for coachbuilders we only have to explore Manchester's other coachbuilders. Anne Cowburn was also a high-class, long established coachbuilder. Yet they did not enter the motor industry until 1909 when they announced in an advert:

¹⁴² There are numerous small articles on F. Wilkinson and Co. in the early trade journals. For example, *Motorcar Journal* 15/3/1902 p.33

¹⁴³ Beaven, *The Growth and Significance of the Coventry Car Component Industry* p.46

¹⁴⁴ Georgano, *The Beaulieu Encyclopaedia of the Automobile: coachbuilding* p.3 and Foreman-Peck, Bowden and McKinley, *The British Motor Industry* p.7

¹⁴⁵ In 1901 and 1902 the firm had made 7 motor car bodies, Brooks, *Motor Car Coachwork by Cockshoot of Manchester* p.09002. Dissertation held at Science and Industry Museum Archive: YMS 1996/535

¹⁴⁶ Science and Industry Museum Archives - YMS 0197/6/3

¹⁴⁷ Science and Industry Museum Archives - YMS 0197/3/3/2

Finding that there is an inclination amongst our numerous clients to replace their Carriages with Motor Cars, we have opened and equipped... an engineering department and garage.¹⁴⁸

However, there were also new firms like Hollingdrake of Stockport that set up business as early as 1902 specifically to manufacture motorcar bodies.¹⁴⁹

Relationships with customers

As seen above, Cockshoot was motivated to enter the industry after noticing the changing trends in vehicle ownership amongst their customers. Coachbuilders with upper-class clientele were more likely to take this step early.¹⁵⁰ Examining Cockshoot customers and their early business in the motor industry has highlighted the importance of the relationship between the customer and the coachbuilder in the early motor industry. It is clear from our analysis of Cockshoot's customers in Chapter 1 that Cockshoot's customers were upper-class, which included titled owners and the use of heraldry (in Figures 3 and 4), and the stabling facilities offered to customers.

Carriages tended to last a long time and required very little maintenance, especially compared to early automobiles,¹⁵¹ which, in their infancy were prone to unreliability and breakdowns which entailed frequent new purchases for those who could afford it. Among Cockshoot's customers there were several repeating commissions, the most frequent of which were Mr and Mrs Ashworth, who returned four times to Cockshoot for new motorcar bodies between 1903 and 1912.¹⁵² The relationship between the coachbuilder and the customer was important in the making of custom motor car bodies, which could include several visits to the works, and lengthy correspondence over the specifications of design.¹⁵³ This could span several months, as often chassis were made after receipt of an order and coachbuilders would work with each customer to build their specific body. This included choosing the interior decoration, the colour, the style of the body, whether closed or open, how many seats, as well as

¹⁴⁸ *Manchester Courier* 30/6/1909

¹⁴⁹ Clarke, T., *Hollingdrake, coachbuilders: a century in Stockport* (Unpublished, 2002)

¹⁵⁰ Tai Tjong Tjing, "Building Carriage, Wagon and Motor Vehicle Bodies" p.191 and Kinney, *The Carriage Trade* pp.271-2

¹⁵¹ Georgano, *The Beaulieu Encyclopaedia of the Automobile: coachbuilding* p.3

¹⁵² Science and Industry Museum Archives - YMS 196/5/1/1

¹⁵³ Brooks, *Motor Car Coachwork by Cockshoot of Manchester* pp.08025-080059

any other number of customer demands such as luggage space, or items like additional horns, as seen in Figure 47.

What is also noticeable is the number of customers that bought both carriages and motor cars from the firm. For example, the Rice family used Cockshoot either to buy carriages or to get carriages re-painted in 1892, 1896 and 1897 and then commissioned motor car bodies in 1906 and 1908. Similarly G. S. Ball had work commissioned on carriages in 1889, 1890, 1893 and 1895 before purchasing motor car bodies in 1905 and 1906.¹⁵⁴ There are many more examples, but they serve to confirm that the existing wealthy customers who had purchased coaches provided Cockshoot with the potential to move into motorcar body building during the Edwardian period.

Brooks has listed all the motor car bodies manufactured by Cockshoot and shows that between 1908 and 1912 women made up over 10 percent of total motor body customers.¹⁵⁵ This was particularly high especially compared to Cheshire motor registration data which shows that between 1903 and 1911 only 41 out of 3,658 vehicles were registered by women, a proportion of just over 1 percent.¹⁵⁶ An international comparison shows that in Arizona in 1915, only 5.5 percent of automobile registrations were by women.¹⁵⁷ The customer records at Cockshoot therefore support Scharff's suggestion that there were more women drivers and buyers than registration statistics suggest, with the habit being for vehicles to be registered in the male name.¹⁵⁸ The range of female customers and the types of cars they were purchasing shows an interesting variety. Merriman argues that while many women motorists were challenging gender assumptions by racing or driving large powerful cars, other upper-class women positioned motoring as a suitable past-time as chauffeur-driven passenger-owners.¹⁵⁹ This complexity is certainly evident in Cockshoot's female customers of the Edwardian period. For example, racing driver Miss Daisy Hampson purchased a 60 horsepower Mercedes in 1904 and a 120 horsepower FIAT race car that had finished second in the Gordon Bennett race of

¹⁵⁴ Science and Industry Museum Archives - YMS 0196/5/1/9 – The surviving book of heraldry documented repeated jobs

¹⁵⁵ Brooks, *Motor Car Coachwork by Cockshoot of Manchester* p.08005

¹⁵⁶ Horner (forthcoming publication, 2019)

¹⁵⁷ Scharff, J. S., *Taking the Wheel* (New York: Macmillan, 1991) pp.25-26

¹⁵⁸ Ibid.

¹⁵⁹ Merriman, P., *Mobility, Space and Culture* (Abingdon: Routledge, 2012) p.99

1905.¹⁶⁰ At the other end of the spectrum was Miss Ella Ross Cordingly Shaw's more sedate 12 horsepower Velux, bodied by Cockshoot in 1903. While somewhere in between was Miss Parry's 20/30 horsepower Renault bought in 1905, as seen in Figure 47, with a horn for the rear passenger, presumably so Miss Parry could do some backseat driving, behind her chauffeur.

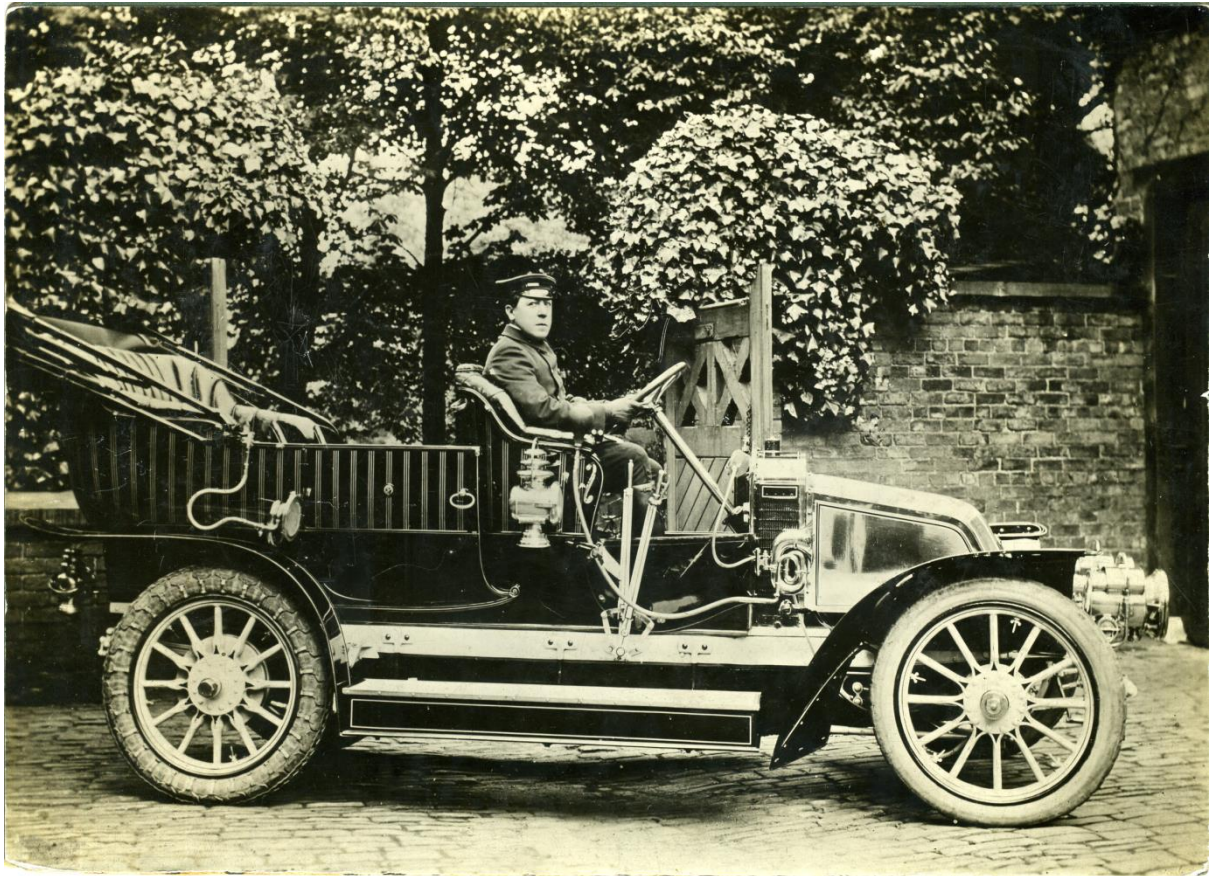


Figure 47- Mrs Parry's 20/30 Horsepower Renault with horn attached to the back seat and chauffeur at the wheel - YMS Cockshoot Photograph Box 1, 1905

Relationship with manufacturers

The relationship between automobile manufacturer, coachbuilder and customer was complex, the coachbuilder acting as an intermediary between the manufacturer and the prospective customer. Cockshoot's large established clientele of rich and upper-class carriage owners wanting to purchase a motorcar would be an attractive proposition to a manufacturer looking for new customers. Cockshoot, as the provider of the car body and as the agent for the manufacturer, would have been the first point

¹⁶⁰ *Manchester Courier* 24/2/1906

of contact when there was a problem with the vehicle. Therefore it was not just the relationship between Cockshoot and its customers that had to be maintained, but also the relationship between the newly emerging car manufacturers and Cockshoot as the agent that had to be established and built upon in order for both the growth and future survival of the new partnerships.

This becomes clear in the case of Mr R. P. Richards who was sold a Rolls-Royce chassis and custom body by Cockshoot in 1911. Full correspondence survives between Cockshoot and Mr Richards and shows the level of customer support that Cockshoot gave, dealing with problems with the coachwork, creating bespoke solutions to mechanical issues, as well as offering to acquire new parts.¹⁶¹ Mr Richards' motorcar body came with 36 personal specifications including a small folding table in the rear, a portable luggage grid at the back with strappings, silk curtains with tassels, tool boxes under the steps, and a generally light body, well sprung, with seats not too upright. Cockshoot also provided him with spares for his Renault, which was being taken by Cockshoot in exchange for his new Rolls-Royce. Richards thanked Cockshoot for writing to Rolls-Royce to press them for quick delivery of the chassis, which Rolls-Royce could not guarantee before Easter 1911. The car was finally ready for Mr Richard's touring holiday in July 1911, the whole process lasting around six months. After delivery, a rattle developed which Cockshoot promised to rectify:

we shall... either send out a man to do what is necessary, or better still to correct the fault here if you will drive it in some day.¹⁶²

Clear in the correspondence is the complexity of the work and the difficulty of dealing not only with bespoke orders but mechanical issues after the sale. The service provided by Cockshoot demonstrates how important it could be for manufacturers to cultivate relationships with good agents such as Cockshoot, who began to build up years of experience building on particular chassis as well as becoming intimately familiar with particular models.

¹⁶¹ Brooks, *Motor Car Coachwork by Cockshoot of Manchester* pp.08025-08059

¹⁶² This correspondence, recorded in Brooks, *Motor Car Coachwork by Cockshoot of Manchester* pp.08025-08059, it is part of a private collection.

After the short-lived agency for American steam cars in 1903 Cockshoot struck up a good relationship with Renault that lasted several years. This relationship developed through personal contacts and the former Motor Department Manager Mr P. Dobson left to work for Renault in London. It was this agency, and the custom body orders that came with it that helped guarantee Cockshoot's success before 1914. Brooks' analysis of motorcar bodies built shows that 36 of 52 bodies built in 1906 were Renaults, and 78 out of 118 in 1907.¹⁶³ However this relationship ended around the time of the First World War, perhaps because Dobson left Renault to manufacture his own cars. A more lasting relationship was formed with Rolls-Royce, for whom Cockshoot would be local agents well into the middle of the century. While Rolls-Royce and Renault agencies fit with Cockshoot's upper-class clientele, after the First World War their relationship with mass car producer Morris was to be of more importance in a period that saw the rapid growth of automobile sales in the UK.

A new heading for the future can be seen in many aspects of the automobile during the interwar period, not just in sales figures and the number of new manufacturers, but also in the activity of dealers and coachbuilders, who were quick to establish selling patterns. An advert by E. Bradshaw of Preston highlights the scarcity of available cars: "1919 Model Fords actually in stock"¹⁶⁴. While all over the country showrooms were newly taken up such as E. Brown of Burnley advertising to motorists in March 1919.¹⁶⁵ Figure 48 shows the rapid increase in dealers and agents after the war doubling from 22 in 1918 to 44 in 1921. This optimism is demonstrated with ventures in the co-operative movement such as the setting up of the Rochdale and District Co-operative Motor Society in 1919, a joint venture with many of the local co-operative societies, whose services included sales, repair and servicing.¹⁶⁶

¹⁶³ Brooks, *Motor Car Coachwork by Cockshoot of Manchester* p.05008

¹⁶⁴ *Lancashire Evening Post* 13/1/1919

¹⁶⁵ *Burnley News* 29/3/1919

¹⁶⁶ *The Producer* 15/12/1919

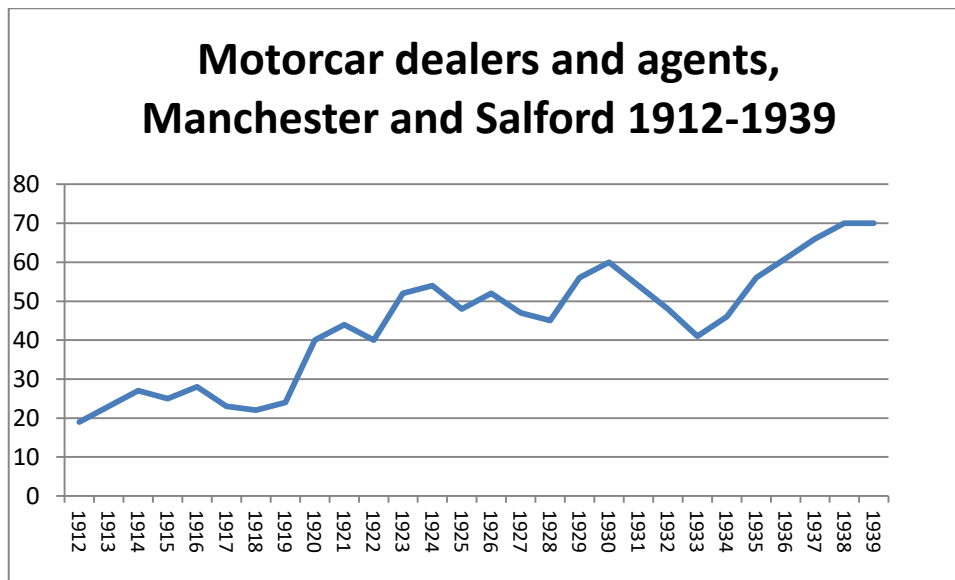


Figure 48 - Source for data *Slater's Manchester and Salford and Suburban Directory* (Slaters Directory Limited, Manchester) 1912 to 1939

Earlier in the chapter we explored how motorcycle manufacturers were able to tap into existing customer-dealer relationships in the cycle industry. These existed for local cycle retailers, which began to offer both bicycle and motorcycles to their customers. Similarly established coachbuilding firms like Cockshoot offered fledgling motor manufacturers an opportunity to tap into their rich clientele who were, in the Edwardian period, beginning to buy motor vehicles instead of horse-drawn carriages. At the same time new types of agencies developed, neither attached to the carriage or the bicycle industry, but run by young entrepreneurs. One of the best examples was Charles Rolls' partnership with Henry Royce, Rolls acting as sole-agent for Royce cars. This relationship demonstrated the importance for a manufacturer of securing good agents; the annual shows acted as a way in which manufacturers could sell and advertise in order to get large contracts with prospective dealers. This in turn led dealers to advertise and sell to their local sub-agents and to local customers. The Ford dealership Quicks also represents how enticing the automobile was for young businessmen. Harry Quick, aged 21 in 1911, was given a 15 HP Fiat by his father. Instead of using it for touring, he started a taxi business. A year later his brother Jim partnered up and they built a garage with a fleet of hire cars, taxis and a small repair

business, which quickly involved the selling of cars at which after the war the firm would become very successful.¹⁶⁷

Cockshoot continued their association with Rolls-Royce into the interwar period both making the occasional body and acting as regional agent. However, more important to their survival and prosperity was their relationship with Morris, one of the most successful mass producers of the era. The first agency agreement with Morris was signed in September 1919 for a modest 50 cars.¹⁶⁸ However, as Figure 49 shows, the number of cars being supplied to Cockshoot's was as high as 2,200 by 1925. This boom in sales coincided with the rapid rise in fortunes for Morris. It also shows the importance of gaining an agency for a popular car. A rise in car sales necessitated the opening of a new showroom in St. Ann's Square in 1927, increasing their potential usership. The first Morris Minor was delivered to the show room, advertised as the first £100 car, in 1930. John Norris remarked from memory that "Within minutes the showroom was almost besieged by people wanting to see this new, cheap car".¹⁶⁹

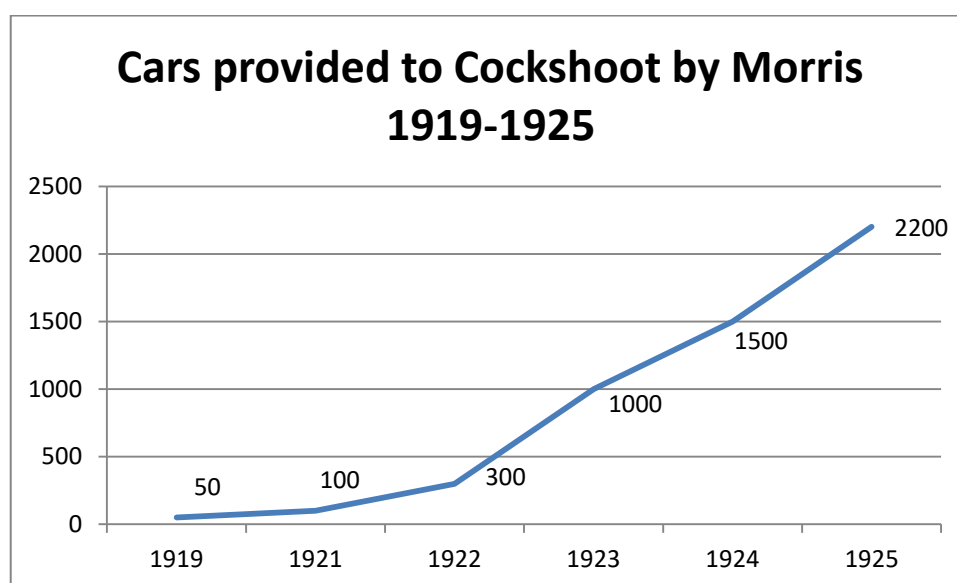


Figure 49 - Data from Cockshoot surviving dealership agreements YMS 0197/1/2

¹⁶⁷ Brooks, *Quicks: the first 75 years* pp.9-10

¹⁶⁸ Science and Industry Museum Archives - YMS 0196/1/2/5

¹⁶⁹ Brooks, *Motor Car Coachwork by Cockshoot of Manchester* 09009

Motorcar advertising developed in the interwar period to be an extremely important aspect of the industry in what is, in modern times, one of the biggest sectors of advertising. In America motorcar advertising spending rose from \$3.5 million in 1921 to \$9.3 million in 1927.¹⁷⁰ Examining Cockshoot's yearly contracts with Morris shows the rapid development of the relationship between agent and manufacturer during this period, demonstrated by the changing emphasis of the dealer's advertising stipulations. In 1919 Morris stipulated that agents simply put up a sign outside and highlighted their role as Morris agents on all advertisements and printed material.¹⁷¹ By 1924 with the number of cars taken by Cockshoot rapidly increasing the agreement changed to include much more detail for sub-dealers, including rates of commission and rules of appointment. Whilst Cockshoot had the agency for East Lancashire and Cheshire, they were based solely in the city centre until after the Second World War, so they relied on sub-dealers in the towns outside of Manchester. By the 1939 season the agreement described Cockshoot as "distributors", overseeing the appointment of "dealers" and "retail dealers". They were provided with a small fleet of nine demonstration models which they were to use during the season, and Cockshoot and its partnered dealers were selling 4,000 of the various Morris vehicles a year. The contract for 1939 included increased advertising stipulation, as well as maintaining a "demonstration fleet". Cockshoot were now obliged to spend a minimum of 10s per vehicle sold on advertising:

The distributor shall actively and continuously advertise Morris Vehicles, using as media his local papers, poster hoardings and mailing list.¹⁷²

Important in the success of both Cockshoot and Quicks was a continued emphasis on complete customer service, an important aspect of the customer's decision to purchase particular motorcar makes. Both had excellent service facilities for their customers. For example, Cockshoot opened a Morris Service Depot in Manchester town centre in addition to its sales and general garage facilities. The depot offered a "periodical Inspection Scheme", and a service booklet sold with the car offered

¹⁷⁰ Aspray, "One Hundred Years of Car Buying" p.19

¹⁷¹ Science and Industry Museum Archives - Morris 1920-1921 Agent's Agreement - YMS 0196/1/2/5

¹⁷² Science and Industry Museum Archives - Morris 1938-1939 Distributor Agreement - YMS 0196/1/2/12

coupons for regular service. Furthermore, an advertising leaflet emphasised the “expert staff” and the wide variety of held spares, with a value exceeding £6,000.¹⁷³ Quicks also had a large dedicated Ford service depot. On the sign outside the front of the depot was “Sales” and “Service” alongside each other and Quicks boasted that their

section devoted to stocking, selling and forwarding “spares”... takes up an area nearly four times the extent necessary to comply with regulations.¹⁷⁴

That both dealers were able to do this shows both the stability of the relationship with the manufacturers and the value in which good dealers were held by manufacturers. This steady relationship was also valued by customers. In 1933 an advert in the *Manchester Guardian* boasted 10 years of supplying the Manchester Corporation with Ford trucks and vans, and an important part of this continued relationship was their “unrivalled service facilities... Quicks are not merely dealers – they are specialists in after-sales service.”¹⁷⁵

Examination of dealers and agencies shows that these long and lasting relationships were difficult to maintain, partly because of the competition amongst manufacturers, but also because the abilities and motives of agents differed wildly. An article in the 1919 *Motor Cycle* highlighted this and argued

One of the first reconstruction problems I therefore maintain, in the interests of business prestige, is the abolition of promiscuous agencies without investigation. The manufacturer must work directly hand in hand with his accredited agencies, so that "real service " may be maintained.¹⁷⁶

The article highlights that for many agents service ended with the sale, and they took no interest in advertising, using the advertising allowance as a bonus. It also draws attention to unscrupulous agents who, especially in early interwar years looked to corner the local territory by securing as many agency agreements as possible and thus take out competitor agents just by holding stock of several makes without really

¹⁷³ Science and Industry Museum Archives - 1929 Morris Cars leaflet – YMS 0197/1/9/25

¹⁷⁴ Science and Industry Museum Archives - Ford Service leaflet 1922 H & J. Quick - YMS 2007/86/1/1

¹⁷⁵ Brooks, *Quicks: the first 75 years* p.45

¹⁷⁶ *Motor Cycle* 9/1/1919 p.34

focusing on selling. Thus a trusting relationship was key and through Quicks and Ford, and Cockshoot and Morris, we see how this developed over the interwar period.

Ford gave more autonomy and freedom to its agents, who unlike several other manufacturers in the UK, allowed their agents to pick up as many cars as they wanted from the factory as they rolled off the production line, paying in full on collection, with Ford also allowing for returns.¹⁷⁷ This allowed great flexibility and was certainly an important factor in attracting the 829 dealers that the company could boast at the beginning of 1919.¹⁷⁸ Other manufacturers such as Morris agreed the number of models for the dealer at the start of every motoring season. Things changed however when Ford imposed American management after the resignation of British Managing Director Percival Perry. In 1919 new contracts were imposed which set dealers quotas, made dealers sell Ford cars only and abolished territories. Riley, Lilleker and Tuckett, and McIntosh, identify this move as disastrous for the dealer network that Ford had built in the UK since its arrival in the early 1900s, as it signalled the end of years of good relations.¹⁷⁹ In July 1919 only 268 dealers had signed the new agreement and Perry in his memoirs alluded to the damage done:

Warren Anderson [Managing Director] almost completely ruined the marketing system which had slowly and painfully to be rebuilt... most of them would not handle a Ford car on any terms whatever.¹⁸⁰

While Perry would certainly be prone to overexaggerate the damage done, when we examine the Quicks archive material we see some evidence of the alienation caused by successive American managers on the sales side of the business. For example, in a series of letters between the Sales Manager at Ford and James Quick in 1923 Ford began interfering in the autonomy of the dealer, by refusing to sanction the opening of a new showroom in the middle of Manchester and threatening to cut off the supply of cars, in which Quick replied by demanding an apology for the abusive behaviour of the

¹⁷⁷ Chetham's Library Archive – Herbert Morton Collection – 11.2

¹⁷⁸ Riley, Lilleker and Tuckett, *The English Model T Ford* p.124

¹⁷⁹ Riley, Lilleker and Tuckett, *The English Model T Ford* p.124; McIntosh, *Ford at Trafford Park* p.195

¹⁸⁰ Riley, Lilleker and Tuckett, *The English Model T Ford* p.124

sales manager.¹⁸¹ Although relationships were strained during this period they managed to recover with Quicks being ever more committed to their manufacturer.

Scholars highlight how the manufacturing structure changed from large numbers of small producers, to a small number of large-scale producers.¹⁸² This was not mirrored in the service motoring sector which offered an opportunity for many successful smaller business ventures in local areas. While motorcar manufacturing in Manchester disappeared during the interwar period, other motor businesses adapted, and thrived. During the period the number of garages, repair shops, dealerships and agencies in Manchester and Salford went from 77 businesses in 1919 to 307 by 1939, a sign not only that motoring was becoming an ubiquitous activity, but that the car, and its sale, had become a key aspect of the city's high street shopping experience.¹⁸³ Important in this was the relationship between the dealer and the manufacturer, where lasting relationships were key, and the stability this produced encouraged continued relationships between dealer and customer over many years. It was therefore important for manufacturers, in the success of their production, to find "good" dealers and to maintain loyalty once they had been appointed. While the fortunes of Morris and Ford were variable during the interwar period, both Quicks and Cockshoot expanded and grew their reputations for service and customer care and both were to continue their relationships with their manufacturers successfully well into the second half of the twentieth century.

Belsize and Austin: the power of dealer networks in the interwar period

The early 1920s was a difficult period for automobile manufacturers. As Figure 36 shows the numbers were in steep decline. It was not only the new firms that struggled in the interwar market, but established firms too. Ford went from market dominance at the beginning of the period to a much smaller market share and Belsize entered receivership, liquidated by 1925. Ford's troubles are explored in Chapter 1, particularly the relatively under explored negative portrayal of the Model T in popular culture.

¹⁸¹ Science and Industry Museum Archives - YMS 2008.10.14.4

¹⁸² Foreman-Peck, Bowden and McKinley, *The British Motor Industry* p.38

¹⁸³ Slater's trade directories get proper reference

Compared to Ford, and other successful interwar firms, Belsize are relatively unexplored in scholarship and therefore serve as a useful case study during this period. What is striking about the firm is their relative similarity to Austin immediately after the First World War and a comparison between Belsize and Austin during this period can provide us with some insights into the difficulties facing larger motor manufacturers during this era. Both firms supplied the Ministry of Munitions during the war, massively expanding their workforces and factories. Belsize produced about 4 million shells, and Austin 8 million.¹⁸⁴ Because of this, both were slow to return to normal production and were therefore affected particularly by the iron moulders' strike of 1919-1920. Both entered receivership with the Midland Bank soon after the war, Austin in 1921 and Belsize in 1923. Yet while Belsize had wound up by 1925, Austin was well on the way to becoming one of Britain's largest interwar motor manufacturers having turned things around successfully. This case study examines why Belsize struggled when Austin did not, with particular attention to the overall attitude of management, relationship with their dealers and the reaction to receivership. These two firms have also been chosen for comparison because there is much research on the Austin Motor Company, for example by Roy Church, while the Belsize receivership papers held at the HSBC archive represent the largest collection of material for any single company in Manchester during this particular period, and are a good source highlighting the difficulties manufacturers faced.

Automobile historians emphasise the need in the immediate period after the war for affordable, light cars, evidenced by the successes of the Morris Cowley and the Austin Seven from 1922.¹⁸⁵ Until then, both Belsize and Austin had been slow to recognise the demand in this area, focusing instead on single mid-ranged models. For Austin it was the Austin Twelve and for Belsize a 15/20. This seems especially surprising for Belsize who moved into the light car market in 1911 with the successful Belsize 10/12. It is possible however that they saw the dominance of local manufacturer Ford as tough competition in this area, and a focus on a single model was influenced by Ford's pre-war success with the Model T. Church notes that Austin ignored the call from its agents

¹⁸⁴ Church, *Herbert Austin* p.43

¹⁸⁵ Foreman-Peck, Bowden and McKinlay, *The British Motor Industry* p.39

for a small car in 1918,¹⁸⁶ while at Belsize's 1919 AGM the directors were concentrating efforts on improving their medium 15 horsepower car.¹⁸⁷ Belatedly both firms recognised the increasing demand for smaller cheaper cars; however the success of their attempts were markedly different. Austin built the Seven which was sold from 1922, for "the man who, at present, can only afford a motorcycle and sidecar, and yet has the ambition to become a motorist."¹⁸⁸ The Belsize-Bradshaw, a small car with a 9 horsepower oil cooled engine, was described by motoring historian Worthington-Williams as no match for the Austin Seven in terms of engine ability.¹⁸⁹

While technical superiority and pricing were important there were other factors of difference that are similarly striking, and relatively unexplored. One of these was the difference in reaction to entering receivership. What is clear from Church's analysis of Austin's receivership is that the core of the firm's management remained, with Herbert Austin still at the forefront. However, for Belsize the firm's leaders, who had been in place for decades, were completely changed. This might have been due to the following report by Francis Wade commissioned by the receivers for an independent engineering review in June 1923:

All these gentlemen were extremely courteous, but there appeared to be a lack of purpose and all seemed to have lost heart in the undertaking, and thus the general organisation – which probably existed more or less efficiently in the past – now appears to be entirely lacking, and no initiative or any description were evident in the general control of the Works or the Works' policy.¹⁹⁰

Soon after receivership the board of directors was completely new apart from James Hoyle-Smith, who instead of being Managing Director was now "Technical Advisory Director", replaced as Managing Director by the former consultant engineer Francis Wade.¹⁹¹ And in 1924, Hoyle-Smith is no longer mentioned in any of the bank's correspondence. This lack of energy and the almost complete absence of former leaders in the board room stands in contrast to the Austin Motor Company, whose

¹⁸⁶ Church, *Herbert Austin* p.73

¹⁸⁷ *Manchester Guardian* 5/12/1919

¹⁸⁸ Church, *Herbert Austin* pp.77-78

¹⁸⁹ Worthington-Williams, "The Belsize from Manchester" p.32

¹⁹⁰ HSBC Archive - Wade report to receivers on the Belsize Motor Company 11/6/1923 - UK1649

¹⁹¹ HSBC Archive - UK1649.1 15/11/1923

management and boardroom changes, Church argues, served to help Herbert Austin's "fertile mind".¹⁹² At the Olympia show of 1920 Belsize were advertising "a reputation of a quarter of a century", however by 1924 the firm's management and board of directors were entirely new to the firm.

Examining the demise of Belsize also shows the importance of the long term loyalty of dealerships. With its 25-year history, Belsize had established a number of these lasting relationships. However, these relationships were badly damaged by the 1922 Engineering Employers Federation (EEF) lockout which brought production to a standstill. Orders were not completed, resulting in a loss of business for agents and the firm alike. In 1924, with a number of cash and restructuring problems, the Sales Director blamed the inability of the firm to supply dealers quickly enough as reason for their poor performance: "we did not get into production until all my most valuable Buyers were booked up".¹⁹³ While the 1923 receivership report noted that:

there seems to be a lack of confidence between the Firm and its agents which has resulted in the falling off of the orders.¹⁹⁴

This confidence is highlighted as crucial by the firm's new Managing Director Wade. A year after taking over he noted:

When I came into the matter I found that all the Company's agents were thoroughly dissatisfied with their treatment in the past, and it was only by the personal influence and promises given... that we were able to re-establish their confidence and induce them to place contracts.¹⁹⁵

Surviving correspondence with agents shows the high level of feedback that manufacturers received. In 1924 for example, the Edinburgh and District distributors Forest and Company highlighted the quality of the 14/30 HP car and its suitability for the hilly roads of the area and, while offering to put the firm in touch with satisfied customers, regretted the increased price of the car.¹⁹⁶ However, the damage was done and by 1924 the firm only had 38 contracts signed by agents in the UK, compared to

¹⁹² Church, *Herbert Austin* p.197

¹⁹³ Letter from Sales Director Adams to the Managing Director Wade 18/8/1924 UK1649

¹⁹⁴ Wade report to receivers on the Belsize Motor Company 11/6/1923 UK1649

¹⁹⁵ UK1649.1 10/12/1923 Letter from Francis Wade to the receivers

¹⁹⁶ HSBC Archive - Letter from Forrest and Co. to Belsize 13/8/1924 UK1649

178 in 1921.¹⁹⁷ Winning back dealers was made even more difficult while in receivership. This highlights the importance of continued dealership confidence, with was difficult to win back, even with the quality product that reviews suggest the 1924 14/30 HP Belsize was.¹⁹⁸

Austin also suffered with their agents ignoring the agents' call for a small car.¹⁹⁹ However, Austin turned this around and kept the confidence of agents throughout their receivership period. Evident in Church's analysis of the firm were some key ways in which agents felt involved. This included visits to the works to have a say in the development of the Austin Seven in 1921,²⁰⁰ and in 1928 initiatives such as the Austin Finance Company allowing agents to buy stock with credit.²⁰¹ Austin was also acutely aware of supply problems during receivership arguing in 1924:

We cannot expect to continue to get whole-hearted support from agents and dealers if we don't supply them with as many cars as they can sell... at the present rate of output we are only annoying our agents and customers.²⁰²

Automobile scholars focus on managerial decisions, technical aspects of production, engineering, pricing and financial constraints when explaining the success and failure of firms. This comparison between Belsize and Austin highlights the importance of other factors, particularly the relationship between dealers and the manufacturer, an often ignored part of the automobile supply chain, and an important link between the designer and the user. Firms such as Austin, then, were better able to manage this relationship, both through the continuation of personal relationships, but also in the way in which they got agents involved in the decision making at the firm. Belsize, during their tricky period from 1922, utterly failed to deliver, resulting in the loss of confidence, loss of agencies and therefore the loss of orders of some well-engineered cars.

¹⁹⁷ HSBC Archive - List of contracts signed for 1921; List of contracts signed, and cars agreed 1924 - UK1649

¹⁹⁸ For example, the review of the *Aberdeen Press Journal* 28/1/1924, similarly the *Sketch* 23/6/1924; for none journalist review there was also a letter from car salesman William Rootes: HSBC Archive - UK1649.1 19/8/1924

¹⁹⁹ Church, *Herbert Austin* p.73

²⁰⁰ *Ibid* p.71

²⁰¹ *Ibid* p.91

²⁰² *Ibid* p.98

Conclusion

This chapter's aim is to investigate areas of the automobile industry that are relatively under explored. Salespersons and sales organisations have been highlighted as the “‘missing masses’ of technology studies”.²⁰³ Therefore this section has focused on the role played by automobile agents and dealers in the industry. The first chapter highlighted how local traders played an important role in local automobile clubs, engaging with customers, but also fellow motoring enthusiasts. Building upon this, we have shown in this section how dealers and agents formed an important link between the manufacturer and consumer. As the industry evolved, Ford pioneered the nationwide dealership network that focused on after-sales service, including easy access to spare parts and repairs. This emphasis contributed towards the end of small localised manufacturers who could not compete with such nationwide coverage. However, this was not just because of Ford's access to capital but because it was able to build confidence amongst dealers as to the quality of the Model T, and in the mutual benefit of a lasting relationship.

The importance of the customer-dealer-manufacturer relationship has been shown to be crucial in the rest of the analysis, both looking at the fortunes of Cockshoot, and by examining the failure of important local motorcar manufacturer Belsize.

Manufacturers built relationships with agents that depended on strong mutual cooperation. Agents wanted a steady supply of good quality vehicles, access to spares, an agreed area of control, and a manufacturer willing to listen to feedback.

Manufacturers wanted agents with an established customer base, proactive advertising and sales strategies. We see in this mutual relationship how the balance of power did not always necessarily lie with the manufacturer. When new management at Ford tried to increase control over their agent network, their attitude led to agents abandoning the firm. Similarly agents quickly abandoned Belsize when promised deliveries did not arrive.

This section has also shown how exploring “missing masses” can contribute towards our understanding of the co-construction of technology. Agents played a crucial role

²⁰³ Pinch, “Giving Birth to New Users” p.248

linking the user and the designer. Closer to user feedback, agents were the first to pick up customer wants, demonstrated by the agents push for Austin to produce a lighter car long before the manufacturer focused on such a model. Similarly the coachbuilder built the amenities and body that the user desired, which built an understanding of what the user needed, which in turn influenced what qualities coachbuilders desired from motor vehicle manufacturers.

3.5 - Regional factors in the development and decline of the industry

The initial aims of this project involved investigating regional aspects of the motor industry in order to examine if, and to what extent, it differed from the national context. In the previous chapters we examined a few aspects of the regional market. In Chapter 1 we argued that although a few northern firms used regional ties to market vehicles, this was often done by the region's American firms Ford and Willys Overland Crossley as part of their drive to combat anti-American prejudice in the British market. In Chapter 2 we showed how commercial specialisation was important for regional markets. Yet overall there were few important regional aspects that affected the North-West's motor industry, or indeed in any region, especially as the industry became established.

Timmins, writing about manufacturing industries in the North-West, argues:

the process of industrialisation, which after all is a regional or sub-regional phenomenon, has varied substantially from one place to another, not only in terms of product emphasis, but also regarding the means of production adopted and its organisation. Accordingly, generalisation at national or international level, including "stage theories" of economic development, can do no more than provide broad and, perhaps, rather limited insights²⁰⁴

Unsurprisingly due to the regional focus of his research, Timmins emphasises regional factors and differences as an important step to understanding industrial development. Coventry and the Midlands was the centre of the early motor industry due to the large number of cycle manufacturers, an industry from which the motor industry emerged, and often used as the primary argument for the concentration of motor manufacturers in the region.²⁰⁵ Scholars argue that the move of early firms such as Daimler to Coventry also contributed towards Coventry's position as the centre of the motor industry, and a number of firms followed their lead. Daimler set up in Coventry because there was a large disused cotton factory that was convenient, and Henry

²⁰⁴ Timmins, *Made in Lancashire* p.2

²⁰⁵ Saul, "The Motor Industry in Britain to 1914" p.30; Beaven, *The Growth and Significance of the Coventry Car Component Industry* p.39

Lawson, the founder of the firm, had links with cycle traders in the area.²⁰⁶ Thoms and Donnelly argue that Coventry was economically beneficial for early manufacturers because there was access to a cycling-related engineering workforce and component sector, as well as a banking system used to the cycle and motor industry's need for capital in the off season.²⁰⁷ However, Saul argues "it is questionable whether, apart from a desire to be near the centre of the grapevine, there were serious economic factors involved."²⁰⁸ Apart from the initial draw of Coventry and its cycling heritage there have been few reasons suggested as to why firms might benefit from geographical proximity to one another. In this section we will show that firms might benefit from being away from engineering hubs, thus escaping the stronger engineering trade union organisation in cities such as Manchester and Coventry. The movement out of industrial centres is reflected particularly in the interwar period when Morris and Austin, relatively isolated in Oxford and Longbridge, dominated the motorcar market. Beaven notes how the component industry tended to also locate outside of traditional industrial centres during this period.²⁰⁹ Similarly Marr's exploration of motorcycle manufacturing highlights how many marques were successful outside of manufacturing clusters, and identifies a general shift beginning in the 1930s and increasing in the post-Second World War period away from manufacturing centres such as the Midlands.²¹⁰ In terms of regional factors influencing the rise and decline of regional industry there have also been few explanations. As we have seen in our initial statistical analysis the North-West's industry generally followed national trends for entry and exits, as well as the longevity of firms. This was also the conclusion made by Beaven and Thoms and Donnelly in their studies of Coventry, namely that production was generally influenced by performance of the industry as a whole.²¹¹ Although Thoms and Donnelly argue that Coventry's "powerful craft traditions... helped to direct the pioneer motor firms toward the construction of limited numbers of high quality vehicles".²¹² Beaven suggests that the concentration of

²⁰⁶ Saul, "The Motor Industry in Britain to 1914" p.29; Thoms and Donnelly, *The motor car industry in Coventry* p.36

²⁰⁷ Thoms and Donnelly, *The motor car industry in Coventry* p.38

²⁰⁸ Saul, "The Motor Industry in Britain to 1914" p.30

²⁰⁹ Beaven, *The Growth and Significance of the Coventry Car Component Industry* pp.50-51

²¹⁰ Marr, "The geography of the British motorcycle industry, 1896-2004" pp.171-172

²¹¹ Thoms and Donnelly, *The motor car industry in Coventry* p.66; Beaven (1994) p.45-46

²¹² Thoms and Donnelly, *The motor car industry in Coventry* p.228

a large number of firms in Coventry created a business community, in which a network of business contacts and knowledge was important. This included social participation in middle-class clubs where deals could be discussed and struck. However, the influence of these informal contacts is inevitably hard to quantify.²¹³ Despite this, a similar business community existed in the North-West. We have seen in our investigation of the origins of the industry that motoring clubs such as the LSPTA and MAC offered social environments for businessmen interested in the industry and could form a source of technological and financial support. Similarly Manchester, in the pre-1914 period had a particularly active motoring trade organisation.

This section therefore will examine whether regional factors and a regional base were important in the development of manufacturing businesses. So far during this thesis it has been found that customer, dealer and manufacturer relationships were important for the success of business. These relationships were formed at a local level as regional dealers were almost always the point of contact between consumer and product. It has been found that connections with regional consumers were important but as agents and dealer networks expanded and evolved this nullified the importance of particular regional locations for manufacturers.

Locality was important as many early manufacturers that produced on a small scale had few or no dealers, and thus they themselves served as both manufacturers and agents. The proximity of customers to manufacturers can be seen when examining sales and local ownership. The Cheshire registrations show 21 Eagle vehicles registered between 1904 and 1905 when mandatory registration became law.²¹⁴ Figure 50 shows the distribution of registered Eagle vehicles, based in Altrincham, and vehicles made by Robinson and Price, Liverpool based motorcycle manufacturers between 1904 and 1907. Both firms produced modestly priced motorcycles and motor tricycles. There is a clear concentration of Eagle owners in North East Cheshire, compared with the concentration of Robinson and Price owners on the Wirral, with a lower concentration and mixture in mid-Cheshire, offering evidence that customer proximity was important in the early period of the industry.

²¹³ Beaven, *The Growth and Significance of the Coventry Car Component Industry* pp. 185-192

²¹⁴ Cheshire Vehicle registration documents held at Cheshire Records Office in Chester

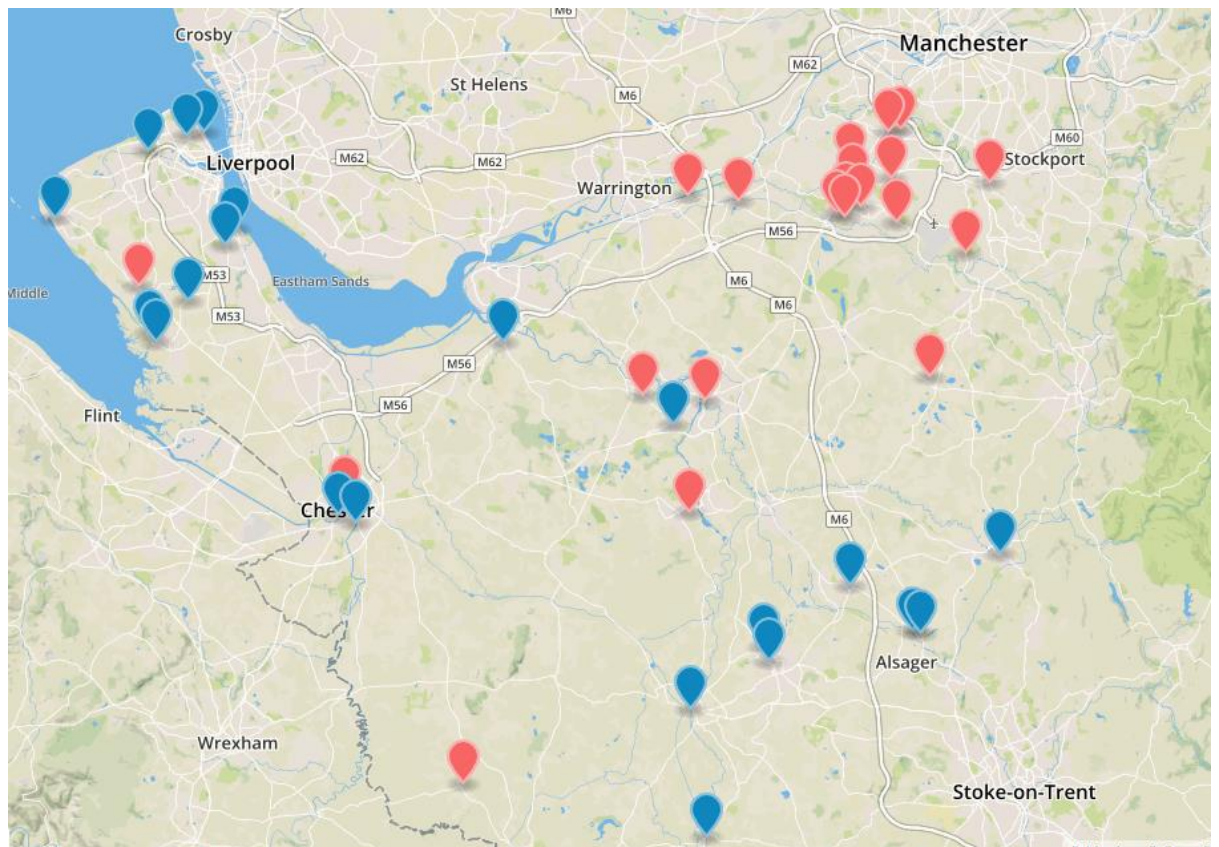


Figure 30 - Showing Eagle owners in Red and Robinson and Price owners in blue -
Source - Horner (forthcoming publication, 2019)

Locality was also important largely due to the unreliability of vehicles. This is particularly the case for commercial vehicles, which in order to be economical needed to be fixed quickly. Foden sales records demonstrate just how frequently spare parts were needed. The Foden “Pioneer” wagon was supplied to the Winnington Co-operative Society in November 1902. The specification notes show spare parts were supplied over the years. Wheels and spokes, new cylinders and a new level pinion were supplied in 1903, new wheels, a new front axle and a chain puller shaft in 1904, with the list going on for several years.²¹⁵ Buying local made it easier for consumers to obtain repairs, but also gave consumers the confidence that repairs, spares and assistance, could, in theory be more easily obtained.

The early importance of local manufacturing is noted in the contemporary press. The *Manchester Guardian* reported in 1905 that:

²¹⁵ Cheshire Records Centre, Fodens Collection: DFO 2944/2/10, Production records

Most of the wagons seen in Manchester district can fairly be described as of local manufacture. Amongst them are the Leyland, the Hercules, the Yorkshire, the Foden, and the Coulthard, all manufactured within a fifty-mile radius of the city.²¹⁶

It is hard to verify the claim made by the local press, as they give no statistical analysis to back up this claim and Manchester vehicle registration records have been destroyed. However, examining data from the Cheshire registration records shows that between 1903 and 1907 the dominant sales area for Foden was the North-West, but between 1908 and 1911 it was eclipsed by the South-East and London, followed by the North-West, with a much more even spread among other areas of the country. This reflects the initial importance of the local market but also its lessening importance after firms had established themselves, both in terms of reputation and with regional agents acting as consumer contact points.²¹⁷

The movements, entries and exits of firms

Examining the movement, entry and exits of firms can also provide an insight into the importance of location in the motor trade. There are two particularly important firms that provide insightful case studies: Rolls-Royce, founded in Manchester, moved to Derby in 1907; and Ford who moved to Manchester from London in 1911, and then moved to Dagenham in 1931.

Rolls-Royce was formed in 1904 after a partnership agreement between manufacturer Royce Ltd based in Hulme, Manchester, and Charles Rolls, a motorcar agent based in London. Rolls gained an agreement for the sole selling rights of the car. The name Rolls-Royce itself represents the importance of the designer-seller/user relationship in the development of the product. This relationship is highlighted by Rolls in a speech given in 1905:

arrangements were made whereby he [Royce] commenced the manufacture of various types to suit my special requirements...In addition to carrying out the general ideas and designs that come from my side... his extraordinary genius has enabled him to

²¹⁶ *Manchester Guardian* 30/12/1905

²¹⁷ Cheshire registration analysis by Horner (forthcoming publication, 2019) - Foden's registered their vehicles in Cheshire when they sold them, so there is a full record of Foden's customer's addresses herein

effect clever improvements in general and in detail which have been possessed in no other make of car.²¹⁸

Features highlighted by Rolls at the time, and emphasised by Rolls-Royce historians, include the minimising of vibrations; the placing of the engine under the seat, hidden to emulate electric cars; and the minimising of sound and smell, presumably for town use.²¹⁹ The agreement between the two firms was a yearly order for cars. However it included some interesting clauses. Clause 4 gave Rolls 30 days to road test and dismantle a model of each type manufactured in order that it might be approved. Clause 5 gave Rolls the option to disapprove of the car and thus get out of the contractual agreement to sell.²²⁰ Fundamental, therefore in the design and manufacture of the car, was the approval of Rolls, the experienced motorist and car salesman.

Rolls-Royce, and Royce in particular, had many ties with Manchester, having been based in the city for several decades as a manufacturer and seller specialising in electrical goods, specifically electric cranes. Their workforce was made up of a number of skilled engineers based in the area. Despite these local ties the firm moved to Derby in 1907 in a move that demonstrated that neither staying local nor moving to another engineering centre, such as Coventry, was important for the firm. Their basic need was an increase in factory space, in order to increase output, having orders that they could not fulfil. Commentators note that although a number of sites was considered, including Leicester and Stretford, the move to Derby was taken after a late approach by Derby city council who offered a suitable site and favourable electricity rates.²²¹ The move involved the transference of most of the Manchester-based staff. Rolls-Royce were famous for manufacturing nearly all components themselves so they were not reliant on a local supply chain. And because they had established dealerships in different regions there is no evidence that a lack of manufacturing presence in the North-West caused any adverse business in the region. Cockshoot, their dealer in East

²¹⁸ Royce speech quoted in Evans *In the beginning* pp.207-209

²¹⁹ Evans, *In the beginning* p.208; p.255

²²⁰ Summarised by Evans *In the beginning* p.244

²²¹ Pugh, P., *The Magic of a Name: the Rolls-Royce Story, Part 1: the First Forty Years* (London: Icon Books, 2000) p.36

Lancashire and Cheshire, continued to sell and model motorcar bodies for Rolls-Royce's existing and prospective customers in the region.

Ford and the move to Dagenham

Ford cars up to 1911 were imported, assembled and distributed from small premises in London. Ford moved to Manchester for a number of reasons, some of which are outlined by the *Ford Times*, which noted the proximity to the Manchester Ship Canal for ease of import, good rail links and unrivalled access to labour, with the North-West as the centre of the cotton trade.²²² A D George argues that Ford may have been attracted by proximity to established Manchester-based firms Crossley and Belsize, although there is no evidence for this, or the benefits proximity to these firms might have had.

Parts were imported from America, and motorcar bodies were built in Manchester for the British market. After 20 years in Manchester Ford moved production to a new site at Dagenham. Ford historians argue that the move to Dagenham meant easy access to the European export market.²²³ This was important as Ford suffered in the mid-1920s from adverse home market conditions with the detrimental horse-power tax. Evidence of the emphasis on Europe can be seen in the creation of the European holding company in 1928, which united management of Ford in Europe under Percival Perry and included the proposal for the Dagenham plant.²²⁴ On top of this the need for imports became redundant during the 1920s as by 1926 nearly all components were manufactured at Trafford Park due to the "McKenna" duties which placed a 33 percent tariff on the import of parts from 1926.²²⁵

However the move away from Manchester began earlier than the late 1920s. Indeed even before 1914 Perry was exploring options of an additional manufacturing site that could serve the European market. A site in Southampton was bought with the aim of

²²² *Ford Times* 1911 Vol.4, in McIntosh, I., "'It was worse than Alcatraz': working for Ford in Trafford Park" in *Manchester Regional History Review* Vol.9 (1995) pp.66-76 p.66

²²³ Riley, Lilleker and Tuckett, *The English Model T Ford* pp.170-171

²²⁴ Riley, Lilleker and Tuckett, *The English Model T Ford* p.212

²²⁵ Claydon, T., "Trade Unions, Employers and Industrial Relations in the British Motor Industry c.1919-45" in *Business History* Vol.29:3 (1987) p.305

supplying parts and cars to Europe.²²⁶ Similarly Cork was used in 1917 as a site for the production of Fordson Tractors. However the direction of European operations was to change so that Detroit would manage European exports, which conflicted with Perry's plans and led to his resignation in 1919.²²⁷ The reemployment of Perry in 1928 coincided with Henry Ford's visit to the UK and the commencement of the development of the Dagenham site.

It is clear that expanding European operations was important to the move; however McIntosh also explores some other factors. Contrary to the free market portrayal of Trafford Estates, it seems that Ford was denied room for expansion although McIntosh does not give evidence for this denial. He argues, though, that a move was inevitable, as Ford's medium to long term multi-national planning was at odds with the unplanned, anarchic nature of Trafford Park. He further argues that the move to Dagenham mirrored the move in the US from Highland Park to River Rouge: "as industrial capital moved into a 'new' phase involving new levels of technology and work organisation." The move was also a sign of "the increasing mobility of capital".²²⁸ Indeed the move demonstrated this, including the removal of much of the factory's physical capital including production line, raw materials and machine tools, and the move of 2,000 of the workforce funded by the company.²²⁹ The firm ended production at Trafford Park and 3 days later started production at Dagenham. This meant almost no disruption to the distribution network, which remained unchanged, serving their regional customers.

The move of Ford to Dagenham marked the virtual end of Manchester's involvement in the motorcar industry. While Crossley Motors continued to produce cars until 1938, their main focus was on commercial vehicles. The North-West still had some significant commercial vehicle manufacturers such as Leyland, Pagefield and Fodens, and indeed commercial vehicle custom was particularly high in the North-West. The mobility of Ford and their focus on the European and global market demonstrates how different the motor industry of the 1930s was from the localised industry of the embryonic

²²⁶ Riley, Lilleker and Tuckett, *The English Model T Ford* p.249

²²⁷ Riley, Lilleker and Tuckett, *The English Model T Ford* p.249

²²⁸ McIntosh, *Ford at Trafford Park* pp.340-344

²²⁹ Riley, Lilleker and Tuckett, *The English Model T Ford* p.213

period where manufacturers like Eagle, and Robinson and Price, were producing and selling from the same location and supplying local consumers.

Local and national motor shows

Beaven highlights the importance of the Coventry business community's informal networking.²³⁰ In Manchester a working business community is demonstrated in Manchester's local motor trade organisation, who organised an annual motor show. This organisation began as the Manchester and District Cycle Trades' Association (MDCTA), before becoming the Manchester and District Motor Trades Association (MDMTA). The annual show took place in February every year and became the Manchester Cycle and Motor Show in 1899, mirroring a national trend for cycle shows also including motor vehicles. In the early years these shows offered the large number of experimental local manufacturers, and potential users a chance to see a wide variety of motor vehicles and to inspect various designs. At these shows design and innovation trends were recognised, offering an opportunity to explore how technological innovation and the direction of design was perceived by the general public. The *Manchester Guardian's* report of the 1900 show highlights this:

there is an increasing number of motors on three wheels. The quadricycle, driven by a motor and provided with two seats, appears also to come more into favour...There is great diversity in the arrangement of these vehicles, but the tendency is towards compactness and comfort.²³¹

The Manchester Motor Show expanded and by 1907 it was housed at Belle Vue which offered 20,000 square feet of show space along with a trial track outside.²³² However, as the MDMTA and the Manchester Motor Show developed it became less for local manufacturers and more for local agents, showing the products of their agreed national and international agencies. This can be seen in the stand holders at later exhibitions, most of which were taken by local agents. For example at the 1913 show Stockport dealers Hollingdrake were showing La Buire cars; Joe Richardson of

²³⁰ Beaven, *The Growth and Significance of the Coventry Car Component Industry* pp. 185-192

²³¹ *Manchester Guardian* 17/2/1900

²³² Chetham Library Archive - Manchester Motor Show application form - F.4.3.11

Altrincham was showing Arrol-Johnston and Wolseley; Lookers, agents in Manchester were showing Swift motorcars; and S.P.A motorcars manufactured in Italy were being shown by an agent based in Leeds.²³³

From 1907 the Society of Motor Manufacturers and Traders sought to control and limit the number of motor shows to a national one based at Olympia in the autumn. This created serious problems for the local interest group, the MDMTA, which battled hard with the SMMT to gain approval to hold the 1907 annual Manchester Motor Show.²³⁴ However, by 1908 the special dispensation to hold an official Manchester show was revoked, although the MDMTA carried on organising annual shows anyway, showing how strong the local trades association was.²³⁵ Even the agencies that were barred from display tried to get their shops in order for the dates of the Manchester Show:

Many of the big firms and agents in the neighbourhood of Deansgate are unfortunately debarred by the anathematised Olympia Show bond of the Society of Motor Manufacturers and Traders, from exhibiting, and naturally these have set their houses in order, or rather shops, by displaying out stocks of latest 1910 models.²³⁶

The dispute lasted until 1911 when the SMMT reconciled with the MDMTA and recognised the show, labelling it the “North of England Motor Show”, one of four annual UK motor shows.²³⁷ The MDMTA became part of the SMMT as the Lancashire and Cheshire district. Part of this allowance was the different season that the shows occupied, Olympia in the autumn and the Northern show in late Winter. Olympia became more of an “agents’ show”, while the northern show provided an opportunity for motorists and prospective motorists to view potential purchases shortly before the start of the motoring season, thus it was labelled a “buyers’ show”.²³⁸ The 1911 edition, under the auspices of the SMMT, was large and featured 140 exhibits. However in 1914 the SMMT organised a referendum for those involved in the 1914

²³³ *Manchester Courier* 22/2/1913 Complete stand lists aren’t recorded but reviews of the show suggest the majority were taken by dealers.

²³⁴ In 1907 the SMMT recognised only three regional shows, Edinburgh, Manchester and Dublin Nixon, St. J. C., *The Story of the S.M.M.T. 1902-1952* (London: Society of Motor Manufacturers and Traders, 1952) p. 45

²³⁵ *Manchester Courier* 21/9/1908

²³⁶ *Manchester Courier* 21/2/1910

²³⁷ *Manchester Courier* 15/2/1911

²³⁸ *Manchester Courier* 15/2/1911

show to see whether more shows were desirable. This referendum proved contentious: Liverpool traders only wanted a Northern show if it was held in Liverpool.²³⁹ Thus there was a prospect of the SMMT stepping in again to withdraw support for a regional show.

However debate was not limited to the importance of local shows, but over the relevance of the national exhibition. Herbert Austin argued that it was a waste of time, effort and resources; and no longer necessary as a primary way of securing orders from agents.²⁴⁰ This seems not to apply in Manchester where the local show continued with high attendances. In December 1913 the venue of the January 1914 Manchester Motor Show Rusholme Exhibition building was destroyed by arson. The committee of the District SMMT had to hastily rearrange. With talks of calling the show off, the journalist reporting speculated a loss of £50,000 to £100,000 in trade.²⁴¹ The show did however go ahead at St. James' Hall, in Manchester.

Meanwhile, one of the important factors of the Northern shows was the dominance of the motorcar section of the trade. A motorcyclist wrote to the *Motor Cycle* on the subject after the 1906 show:

There are a great number of motor cyclists besides myself who cannot afford time to go to London to see such shows as the Stanley Show. In my opinion Manchester is a capital centre for an exhibition... I think the last show was very unrepresentative of motor cycles, considering the number of firms now manufacturing these machines. Perhaps when competition increases a little we shall have a larger variety from which to choose.²⁴²

This opinion was echoed by J.T. Ward who noted "The show [1907] is indeed for the rich."²⁴³ The early shows also did not cater for the growing interest in commercial vehicles, the *Commercial Motor* noting that the 1907 show was of little interest to commercial motorists.²⁴⁴ A correspondent wrote:

²³⁹ *Manchester Courier* 21/1/1914

²⁴⁰ Church, *Herbert Austin* pp.27-28

²⁴¹ *Manchester Courier* 10/12/1913

²⁴² *Motor Cycle* 9/1/1907 p.34

²⁴³ *Manchester Guardian* 6/9/1907

²⁴⁴ *Commercial Motor* 28/2/1907

I looked in at the Manchester Motor Car Show in St. James's Hall on Friday—that being the opening day— but I saw few people interested in the business vehicle, and it accentuated the regret I already felt that two separate shows should be held in Manchester.²⁴⁵

Things improved however and the show became more diverse as time went on. By 1912 the commercial vehicle section of the show included 45 petrol and four steam commercial vehicles.²⁴⁶ By 1914 the show had split into a commercial show and a private car show.²⁴⁷

The Manchester shows demonstrate the strong regional identity that motor traders and manufacturers maintained from the first motor and cycle show in 1897 through to 1914. However, these shows became less about manufacturing and more about local agents and dealers advertising national products at a local level. Despite this the MDMTA represented the strong regional independence of these agents, who defied the pressure put on them by the SMMT for a single national motor show at Olympia. Manchester represented a centre for the North of England, with visitors from Yorkshire, Northumberland, Derbyshire, Cheshire, North Wales and Lancashire. Initially it was used to show experimental machines. As it developed it was beneficial for motor car body builders and agents, who used the show to exhibit examples of their work, while offering local manufacturers a cheaper and nearer option for a show venue than Olympia. By the end of the period, the number of dealerships of private vehicles was growing, and the need for a show was lessening. As well, the motor dealer had an increasing presence on the high street;²⁴⁸ however commercial vehicles did not have the same infrastructure, so the shows became more important for businessmen to compare the growing number of commercial vehicle manufacturers that were looking for lucrative business in Cottonopolis. The changes in the show therefore represent the changing nature of motor consumerism during this period. Shows used to represent the only way in which a potential consumer, or potential agent could see or try a

²⁴⁵ *Commercial Motor* 13/2/1908

²⁴⁶ *Commercial Motor* 22/2/1912

²⁴⁷ *Commercial Motor* 15/1/1914

²⁴⁸ There were 27 dealers in Manchester and Salford by 1914. Many were situated on prominent shopping streets such as Deansgate: *Slater's Manchester, Salford and Suburban trade directory* (Slater's Directory Limited: Manchester, 1914)

motor vehicle. By 1914 however, the club infrastructure and the dealership networks, and the number of motoring publications meant that there was much more help, both for the consumer and motor dealers in choosing the right vehicle. The evolving nature of the shows demonstrates how the local market and local publicity was only initially important for manufacturers, before the nationwide dealership network dealt with and managed regional interest.

Conclusion

We have seen how regional factors were important in the emergence of local motor manufacturing firms. This is particularly so with the ability to interact with other experimental manufacturers through the early trade organisations and at regional shows, but also reacting to users, or proactively encouraging their cycling clients on a local level before serious levels of production could be contemplated. However the importance of regional factors in the location, rise and decline of motor manufacturers quickly lessened. We have seen in our analysis of the movement of firms such as Rolls-Royce and Ford, and in the success of geographically isolated firms such as Morris and Austin, how proximity to component manufacturers or other motor manufacturers was not an important consideration as the industry developed. This reflects the national and international nature of the manufacturing trade, and the mobility that could be achieved both in moving assets such as large machine tools and labour. Above all the development and establishment of automobile sales, conducted by regional independent agents, meant that the crucial regional factor was in choosing and maintaining these agents, who would then provide the manufacturer access to their clientele or the regional consumer market which varied from region to region. The next section will engage with labour organisation, one of the more tangible aspects that influenced regional manufacturing.

3.6 - Labour and the Manchester motor industry from 1914

There are relatively few instances in the UK of disputes between the motor car industry, workers and trade unions prior to the First World War. The notable exception was a strike by workers at the Ford motorcar company between 1912 and 1913. The confrontation between workers and management came about due to a disagreement over the dilution of labour. This was significant because Ford achieved an almost un-unionised workforce, something that other manufacturers, especially in Manchester, did not. The period during, and just after, the First World War was one of much more significance for organised labour in the motor industry. This was particularly the case in the North-West where, with the exception of Ford and commercial vehicle manufacturers, and to some extent Crossley, the passenger car industry had collapsed. It will be highlighted in this section that Manchester's motor manufacturers, with the exception of Ford, were in an almost constant power struggle with trade unions both during the First World War and in the years just after this had an impact on the decline of the North-West's motor industry, especially when we compare the fortunes of Manchester's manufacturers with other centres of the industry, especially in Oxford, the home of Morris, and Longbridge, the site of the Austin Motor Company.

At a national level scholars have tended to include any disruption in the industry during the interwar period as a precursor to the narrative of industrial relations after the Second World War which was generally a much more problematic period.²⁴⁹ Lewchuck sparked much debate in automobile historiography when he argued that labour seriously impeded the British industry in adopting Fordist mass production techniques during the period immediately after the First World War.²⁵⁰ This was soon refuted by Tolliday whose study is one of the most focused works on the early period, and has influenced subsequent general histories on the automobile industry. Tolliday concludes that between 1896 and 1939 unlike the USA and France, British labour "failed to make much of an impact".²⁵¹ This he argues was largely down to the post-

²⁴⁹ For example Turner, H. A., *Labour relations in the motor industry: a study of industrial unrest and an international comparison* (London: Allen and Unwin, 1967); Clausager, A., "Labour Relations" in Georgano, N., Baldwin, N., Clausager, A., and Wood, J., eds. *Britain's Motor Industry the First Hundred Years* (Sparkford: G. T. Foulis & Company, 1995) pp.184-209

²⁵⁰ Lewchuck *American Technology and the British Motor Vehicle Industry*

²⁵¹ Tolliday, "Management and Labour in Britain 1896-1939" p.29

war slump period between 1920 and 1922, which badly hit the organisation of both semi-skilled unions like the Workers Union (WU) and skilled unions such as the Amalgamated Engineers Union (AEU) and the National Union of Vehicle Builders (NUVB) as firms outside of the traditional centres of organisation, like Austin and Morris, started to dominate the interwar market.²⁵² Turner in his analysis of post-Second World War strikes in the industry noted that all pre-Second World War strikes counted for well under 10 percent of total strikes to 1964.²⁵³ Subsequent automobile historiography has accepted Tolliday's conclusion, that there was comparatively little trouble for employers, especially after 1922 and therefore have generally rejected Lewchuck's position,²⁵⁴ although Lyddon argues that while the WU and AEU's position collapsed after 1922 the NUVB maintained its membership and was successful in actions taken well into the 1930s.²⁵⁵

One of the key themes identified by scholars is the gradual change from the use of skilled to semi-skilled workers during the period up to the early 1920s; Church argues this was stimulated by dilution and practices during and immediately after the First World War.²⁵⁶ Tolliday extends this period with his regional examination of Coventry, showing that dilution was happening on a large scale in this region before the First World War, where 45 percent of Coventry's engineers were classed as semi-skilled by 1913 and many bigger Coventry firms had been successful in partly removing unionised workers from production activities.

What were the regional variations and how did they impact on organised labour and the car manufacturers? Importantly Tolliday notes that firms were not so successful in the North, citing two Manchester examples, Belsize and Crossley, before 1914, where the Amalgamated Society of Engineers (ASE) were successful in challenging the firms' attempts to dilute labour on machine tools. Tolliday notes the regional differences, with the ASE much less militant or effective, in actions in Coventry compared with

²⁵² Tolliday, "Management and Labour in Britain 1896-1939" p.46

²⁵³ Turner, *Labour relations in the motor industry* pp.58-59

²⁵⁴ Foreman-Peck, Bowden and McKinley (1995) p. 62; Georgano, Baldwin, Clausager and Wood, *Britain's Motor Industry the First Hundred Years* p.193; Church, *The rise and decline of the British motor industry* pp.24-25

²⁵⁵ Lyddon, *Craft Unionism and Industrial Change* p.584

²⁵⁶ Tolliday, "Management and Labour in Britain 1896-1939" p.41; Church, *The rise and decline of the British motor industry* p.11

elsewhere.²⁵⁷ Despite this there is a general lack of evidence used by Tolliday outside of Coventry, the base of his source material, and this affects his overall analysis. Foreman-Peck, Bowden and McKinley go further and argue that “differential labour resistance might possibly explain the interwar success of the Oxford motor industry compared to that of Coventry”, which had a much longer labour tradition.²⁵⁸ However they fail to explore labour issues during the interwar period in much detail and give little evidence for this conclusion, in a section that covers just over two pages of their work. This conclusion though is supported by Thoms and Donnelly in their analysis of the impact of industrial action in Coventry during the war. They conclude that “the war... reinforced the city’s reputation as an area prone to industrial unrest”, which might partly explain why volume car producers chose not to assemble in Coventry.²⁵⁹

An examination of Manchester’s automobile industry and its relationship with labour during the period from 1914 onwards can help us to test the conclusions of automobile scholars and understand what impact unionisation of the workforce had on the British automobile industry as a whole. This section will explore relations during the war, the period of boom to 1921 and the subsequent slump. It will use sources from the point of view of the employees, the main source being the Manchester and District ASE and AEU minute books which start in 1915. This approach should help balance some of the bias towards employer-based sources used by automobile scholars such as Tolliday.²⁶⁰

The First World War, dilution and disputes

Thoms and Donnelly argue that during the First World War the increase in female labour in semi-skilled roles in the motor industry caused relatively little trouble. The main problem instead was representation in the workplace and maintaining living standards which in 1917 brought about a series of strikes.²⁶¹ However, in Manchester the dilution of labour was to be an ongoing issue for important local firms Belsize and Crossley. There were relatively few problems at the beginning of the war. In 1915

²⁵⁷ Tolliday, “Management and Labour in Britain 1896-1939” p.42

²⁵⁸ Foreman-Peck, Bowden and McKinley, *The British Motor Industry* p.64

²⁵⁹ Thoms and Donnelly, *The motor car industry in Coventry* p.81

²⁶⁰ Tolliday, “Management and Labour in Britain 1896-1939” is heavily reliant on the Engineer Employers Federation record, which only reflect one side of disputes.

²⁶¹ Thoms and Donnelly, *The motor car industry in Coventry* p.80

there were issues over dilution as Belgian refugees working at Crossley refused to join the ASE.²⁶² However 1916 marked the start of friction between employers and the unions at both firms. This was both in relation to dilution by female labour and in response to working conditions and pay. Tension increased into 1917 and 1918 causing problems for both the firms and their workforce, unionised and non-unionised alike.

Increasingly large munitions contracts dominated production at Belsize from 1916, leading to massive upheaval at the works. This started with the firm moving to three shifts to cover every hour of the week, which was agreed to only after the firm had accepted to pay overtime rates for work over 7 and a half hours a day.²⁶³ This deal by the ASE was in cooperation with the United Machine Workers' Association (UMWA). The firm then attempted dilution of labour by using semi-skilled men as supervisors and setters-up of munitions-making machines. This also met with opposition from the ASE and UMWA.²⁶⁴ A shortage of skilled men eventually necessitated the acceptance of dilution. However the unions successfully managed to avoid diluted pay by getting Belsize to agree to pay all instructors the same rate, skilled or semi-skilled. This was constantly contested as the firm tried to reduce rates when they introduced more machines used for the increasingly large munitions contracts. This was noted by the ASE District Committee in November 1916 when they agreed to withdraw their members from setting-up if the firm refused to pay the same rate for all setters-up.²⁶⁵ This issue over pay and dilution came to a head at the end of 1916 when the firm received a massive contract that would entail the employment of 2,000 women workers and 450 unskilled men, 75 of whom would have to be trained to set up machines.²⁶⁶ After 4 months of protracted negotiations involving the Ministry of Munitions, the management at Belsize and the ASE, it was agreed that semi-skilled workers could be put on a lower rate, as assistants. This was only agreed as there was such a shortage of skilled labour that no skilled workers could be found by either the ASE or the Ministry of Munitions.²⁶⁷ Evidently the ASE recognised this shortage, as later in the year it emerged that a subsidiary company of Belsize was using women in skilled

²⁶² Working Class Movement Library - ASE minutes 23/7/1915

²⁶³ Working Class Movement Library - ASE Minutes 17/2/1916

²⁶⁴ Working Class Movement Library - ASE Minutes 7/7/1916

²⁶⁵ Working Class Movement Library - ASE Minutes 7/11/1916

²⁶⁶ Working Class Movement Library - ASE Minutes 21/11/1916

²⁶⁷ Working Class Movement Library - ASE Minutes 20/3/1917

positions. The ASE demanded that the women on the grinding machines be paid an equal rate to a unionised male counterpart, a demand that would have been unheard of before the war, but which was accepted by Belsize.²⁶⁸

Relations between Belsize and the unions took a turn for the worse over the issue of dilution in 1918 with a threat of strike action by the ASE:

We, the skilled men, consider that dilatory measures are being taken to bring this matter to a head, and, unless immediate steps are taken to bring this matter to a close, a down tools is threatened.²⁶⁹

This conflict did not lead to strike action, but there are several instances of attempts to dilute that were curbed by the unions both before and immediately after the war. These examples at Belsize show the relative power of the ASE and UMWA during the war in a Manchester firm that was heavily reliant on union members, with the issues of dilution and pay being at the forefront of negotiated issues.

The union disputes at Crossley Motors were similar to Belsize during the war although Crossley was engaged on aircraft and heavy vehicle production for the armed forces. Like at Belsize, the ASE had issues over lower payment of semi-skilled workers and attempts by Crossley to dilute pay and skilled labour.²⁷⁰ However matters escalated early at Crossley with the ASE District Committee threatening the firm with prosecution and the withdrawal of members if they continued to employ women on machine tools at a lower rate than that set by the union.²⁷¹ This dispute carried on for over a year, with the ASE gaining the co-operation of the Federation of Women Workers at the end of 1917. Eventually an agreement was reached with the Employers' Federation, the ASE and Federation of Women Workers, with women working machines being paid only 10 percent less than their male counterparts.²⁷² Despite the agreement relations were so bad at Crossley that there was a strike in the

²⁶⁸ Working Class Movement Library - ASE Minutes 31/7/1917

²⁶⁹ Working Class Movement Library - ASE Minutes 1/3/1918

²⁷⁰ Working Class Movement Library - ASE Minutes 14/4/1916; 18/4/1916

²⁷¹ Working Class Movement Library - ASE Minutes 30/6/1916

²⁷² Working Class Movement Library - ASE Minutes 8/2/1918

summer of 1918 involving around 1,000 ASE and UMWA members over a pay dispute.²⁷³ The threat of a Ministry of Munitions tribunal put an end to the strike.

The analysis of union activity, then, at both Crossley and Belsize during the war shows that the issue of dilution was certainly important in the Manchester industry, and when dilution was accepted it was only done in conjunction with the protection of pay. Thus Manchester's war-time experience showed more of an emphasis on dilution than Thoms and Donnelly's analysis of Coventry. Despite this, evidence of union activity outside of Belsize and Crossley is sparse. Ford was an example of a motor firm, like Morris, that was relatively unimpeded by union activity during the war. There was only one instance of a dispute at Ford during the war, in 1918 itself very minor with the firm having very few union members.²⁷⁴ The high levels of union activity in Manchester had some negative effects. Belsize was delayed starting some munitions contracts because of negotiations, meaning that although they had a profitable war, it was not as profitable as Austin's whose production levels were double those of Belsize. Despite this, profits at Crossley and Belsize were high during the war. Wartime union activity had a more important impact on the post-war period because it was set up for antagonism after the war which was to have a much more profound effect in what was a very competitive post-war market.

Post-War Problems

The immediate post-First World War period was one of turbulence, both economically and for the labour movement. In terms of labour issues it was one of boom and then recession from almost 100 percent employment to rapidly increasing unemployment. It was also a period of immense competition for both new and established automobile manufacturers. The main instances of industrial unrest that affected the motor industry have been identified in previous scholarship as the iron moulders' strike of the winter 1919-1920 and the EEF lockouts in the spring and summer of 1922. Therefore we will explore the impact of both of these events on Manchester firms.

The iron moulders' strike lasted 20 weeks from September 1919 to January 1920 and affected production in the motor industry during this period. Automobile scholars

²⁷³ Working Class Movement Library - ASE Minutes 5/6/1918

²⁷⁴ Working Class Movement Library - ASE Minutes 14 and 17/5/1918

argue over the extent of its impact. However it seems to have affected firms changing back from munitions work more prominently. For example, Adeney and Church argue that the strike was one of the reasons that Austin entered receivership, causing the loss of production of 3,000 cars.²⁷⁵ Belsize was in a very similar situation to Austin, also affected by the strike. At the Annual General Meeting of 1919, financial results for 1918 and 1919 were not announced and the director noted:

The labour troubles in various branches of the engineering trades are reacting upon us, and the shortage of raw material caused by the prolongation of the troubles is now assuming most serious proportions... our deliveries are being thrown back for the lack of raw materials.... It only remains for the strikes to be settled amicably to enable us to get into our full stride of production.²⁷⁶

The iron moulders strike came at a terrible time for the company. Munitions contracts were quickly wound up by February 1919 and the ASE Minute book shows that the company was attempting to get the works ready to start production by 31 August 1919; however the ASE members reporting from inside were sceptical that this was possible.²⁷⁷ Therefore the strike occurred just as Belsize was readying for production and the subsequent lack of raw materials forced delays into the beginning of 1920. Indeed in 1919 the firm managed to produce only a few hundred cars, which was similar to Coventry firm Standard who also struggled to return to normal production.²⁷⁸ This performance is remarkable when compared with Ford, who had produced 12,175 vehicles and were clear market leaders in a period of unprecedented high demand.²⁷⁹ Ford still relied on imported parts in the immediate period after the First World War although they were moving towards native manufacture due to high import duties. They were therefore rather unaffected by the protracted iron moulders' strike of 1919-1920. Despite this the industrial unrest of the post-war period did touch

²⁷⁵ Church, *Herbert Austin* p.58; Adeney, *The Motor Makers* p.171

²⁷⁶ *Manchester Guardian* 9/12/1919 p.12

²⁷⁷ Working Class Movement Library - ASE District Committee minute book 4/7/1919

²⁷⁸ Thoms and Donnelly, *The motor car industry in Coventry* p.95 give figures for Standard as 350 cars in 1919. This firm had similar delays to Belsize, returning to car production from various war contracts.

²⁷⁹ Figure from September 1918-September 1919, Riley, Lilleker and Tuckett, *The English Model T Ford* p.121; Church, *Herbert Austin* p.13

the firm. A series of dock and shipping strikes in the USA in 1919 led to Trafford Park being shut down temporarily.²⁸⁰

Overtime was a key issue during the early interwar period. The ASE and AEU generally denied overtime requests, arguing that the firms had laid-off members and could hire some more men if there was more work. This was particularly important in 1919 as firms such as Belsize were changing over to normal production from munitions in an effort to get working models to the 1919 Olympia Show. Belsize requested overtime in order to get cars finished for this, which was refused. This was also the case for the British Commercial Lorry and Engineering Company who aimed to produce a motorcar for the first time.²⁸¹ Crossley requested overtime for extended road testers at the beginning of 1919, which was also refused, with the union arguing that road testing could be done inside normal hours. This meant Crossley could not conduct road tests over extended distances.²⁸² However, a request by Belsize for overtime to work on a show model for the Scottish Automobile Show was accepted by the union and in 1921 for the Olympia Show, as the unions realised the importance of the show for employment in the months following.²⁸³

Control of overtime was to be the crux of the issue that led to the EEF's lockout in 1922, which lasted for several months before engineering unions agreed to the EEF terms. Automobile historians view this as a watershed moment for the interwar automobile industry. Victory for the EEF significantly weakened engineering unions' power both through defeat, loss of funds and subsequent decrease of membership and the ability to effectively organise the shop floor in federated firms.²⁸⁴ While this might be the case, scholarship neglects to examine the immediate impact of the 1922 lockout on individual motor firms. In Manchester, especially at Belsize, the lockout was a long way from being a victory for the employers and it served only to hasten the end of one of Manchester's most prestigious pre-war motor manufacturers.

²⁸⁰ Riley, Lilleker and Tuckett, *The English Model T Ford* p.121

²⁸¹ Working Class Movement Library - ASE Minutes 10/10/1919

²⁸² Working Class Movement Library - ASE Minutes 4/4/1919

²⁸³ Working Class Movement Library - ASE Minutes 16/1/1920; 6/10/1921

²⁸⁴ Tolliday, "Management and Labour in Britain 1896-1939" pp.46-47, Church, *The rise and decline of the British motor industry* p.25, Thoms and Donnelly, *The motor car industry in Coventry* p.108

The depression had hit the engineering unions hard, and by July 1921 there were 114,684 AEU members unemployed, whilst the EEF by 1922 had 2,000 firms as members, including Belsize and Crossley.²⁸⁵ In 1921 the EEF had successfully negotiated for a lowering of the piece-rate bonus which saved companies a combined 50 million pounds.²⁸⁶ The next attack by the EEF was on overtime, which many AEU Districts, including Manchester, had put an embargo on. The EEF threatened a lock-out unless overtime was brought under control of management. Negotiations between the AEU, other engineering trade unions and the EEF broke down on 11 March 1921 and union members were locked out of all federated firms. Jefferys, in his history of the AEU, regards the time chosen as deliberate, so as to have little effect on EEF members' profits.²⁸⁷ However this does not apply to motoring firms, whose peak period for deliveries were the spring and early summer months to coincide with the seasonal nature of pleasure motoring at the time. Belsize's Managing Director Hoyle-Smith wrote later in the year that the lock-out was

during 14 weeks of the best-selling period of the year, making a difference in turnover of approximately £400,000.²⁸⁸

There is further evidence that Belsize suffered during the lock-out. In June, 12 weeks into the lockout, members employed at Belsize came to the District Committee, where it was stated:

the Firm are desirous of the men returning with the other 47 Unions to work, promising that no new innovations, or improvements, shall take place regarding the points in dispute... They have to compete with other non-federated Firms in Coventry who are turning out cars wholesale and undermining the prestige of the Belsize. They have tried to get the Firm to break away from the Federation but without success.²⁸⁹

Charles Nuttall, in a letter to the District Committee, confirms the firm's position in writing, adding:

²⁸⁵ Jefferys, J. B., *The story of the engineers: 1800-1945* (New York: Johnson Reprint Corporation, 1970) p.219

²⁸⁶ Jefferys, *The story of the engineers* p.220

²⁸⁷ Jefferys, *The story of the engineers* p.225

²⁸⁸ UK1649.1 Letter dated 14/9/1922

²⁸⁹ Working Class Movement Library - AEU Minutes 4/6/1922

at the time the Dispute started, no changes were contemplated, nor has anything arisen to influence any changes.²⁹⁰

There are several interesting points raised by these negotiations. It seems that many of the firm's rivals were not members of the EEF and therefore would still be producing during this period, while Belsize had ceased entirely. The firm had an almost fully unionised shop-floor, contrary to most rival firms who were attempting volume car production, most notably Ford, Austin, Morris and several Coventry-based firms where the AEU had less influence post First World War.²⁹¹ The "prestige of the Belsize" was likely a reference to a failure to deliver orders during this 14-week period, which would have certainly led to the defection of agents and customers. Considering the management's unenthusiastic support for the lock-out's principles and the damage to revenue and reputation, one wonders why Belsize stayed in the EEF and kept the lock-out notices up at the works.

It must be remembered that these negotiations between the firm and the AEU District Committee came near the end of the lockout, and thus the District Committee was open to talks given that the union funds were exhausted at the end of May, and all benefits were suspended apart from to the sick and superannuated.²⁹² Also a ballot to accept the EEF terms was arranged for 13 June. In March the union's position changed. The District Committee pushed for a walkout on 14 March of all AEU members, including those in non-federation firms.²⁹³ It also passed a resolution that no members should handle any work passed on to other firms. Both Belsize and Crossley tried to get back-axles and gearboxes made by the Buffoline Engineering Co. and the Lancashire Gearing Co. respectively, which was countered by this resolution.²⁹⁴ With this strong resistance in place it is perhaps understandable that the firm would remain part of the EEF. To leave might make little difference, with members leaving firms not federated. For Belsize therefore the lock-out was disastrous, and was to be a big blow to the firm looking to recover from a difficult previous three years. This examination, then, has

²⁹⁰ Working Class Movement Library - AEU Minutes 6/6/1922

²⁹¹ Thoms and Donnelly, *The motor car industry in Coventry* pp.108-109; Tolliday, "Management and Labour in Britain 1896-1939" p.41

²⁹² Jefferys, *The story of the engineers* p.225

²⁹³ Working Class Movement Library - AEU Minutes 14/3/1922

²⁹⁴ Working Class Movement Library - AEU Minutes 14/3/1922

shown that more research is needed into the impact of the 1922 EEF lockout in the motor industry, with scholars having focused on the union weakening after-effects rather than the potential negative consequences of a 14-week lockout in a period of recession.

Post-Lockout union activity: Ford, Willys Overland Crossley and non-unionised workforces

Lyddon argues that scholars have been preoccupied with AEU activity and the motor industry, especially regarding their rapid decline in membership and influence after the 1922 EEF lockout. Lyddon's thesis focuses on the NUVB which he shows continued to exert its influence in the latter half of the 1920s.²⁹⁵ Thus we must explore evidence of post-1922 lockout union activity in Manchester to see if we can contribute to this debate. Willys-Overland-Crossley (WOC) make an interesting case study in this regard, as they attempted to compete with the likes of Ford in the light, cheap car market.

Examining WOC shows that even after 1922 finding skilled, non-unionised labour was difficult in the Manchester area. Trade union membership at the firm was clearly high as members of eight unions in the Federation of Engineering and Shipbuilding Trades of the United Kingdom (FESTUK) were represented on the shop floor. WOC attempted to break union membership among its skilled workers by bringing in non-unionised workers from Birmingham during a strike by the Amalgamated Woodworkers and the Sheet Metal Workers over pay in 1922, leading to all unions affiliated to FESTUK accepting a resolution not to work with imported labour at WOC.²⁹⁶ However, this show of solidarity had mixed results with several members being expelled from the unions on declining to follow the resolution. This led to the firm being declared a "Black Shop" by FESTUK who also attempted to influence non-federated unions to declare the employer a "Black Shop", intimating that several unions still had members and organisation at WOC post-1922.²⁹⁷ Despite this WOC was successful in breaking the position of skilled unions and replacing workers with semi-skilled in several key

²⁹⁵ Lyddon, *Craft Unionism and Industrial Change* pp.583-584

²⁹⁶ Working Class Movement Library - *Federation of Engineering and Shipbuilding Trades of the United Kingdom Journal* (1922) pp.61-62

²⁹⁷ Working Class Movement Library - *Federation of Engineering and Shipbuilding Trades of the United Kingdom Journal* (1923)

areas mirroring the majority of firms elsewhere. This has been noted by scholars and reflects the general weakened position of engineering unions at the time.

This action must have been in part influenced by the success of Ford during the years immediately after the Second World War, with Ford actively welcoming visitors from other firms all around the country. Indeed a worker at Ford recounted the visits:

We had entertained parties from most of our British competitors, providing them with guides and lunch while they “pinched” our secrets.²⁹⁸

The attitude of Ford to organisation on the shop floor is epitomised in the memoirs of Ruth Frow, writing about her husband Eddie Frow, an avid labour activist, who joined Ford at Trafford Park in the 1920s:

This was an immediate challenge to Eddie and he started to organise the tool room into the AEU. In a very short time he found himself outside the gate.²⁹⁹

This is a clear example of the stance that Ford took with unions. Indeed the imitation of Ford went further. According to Eyre, Heaps and Townsin WOC recruited workers from the Ford plant, although they provide no source for this information.³⁰⁰ After the 1922 lockout Belsize’s position as a significant motor manufacturer was effectively ended and they quickly slipped into receivership before being wound up in 1925. Crossley continued in the luxury car market, but no longer had the prominent role in this sector that they enjoyed before the First World War. With mass car producers WOC and Ford effectively breaking the unions, major agitation in the Manchester motor industry from the engineering unions was at an end, with only minor disputes being recorded for Manchester motor firms in the AEU minute books from 1923. Unfortunately it is more problematic to make conclusions that include the NUVB because source material is scarce for the Manchester area.

²⁹⁸ Chethams Library Archive – Herbert Morton Collection –2.1 p.35

²⁹⁹ Frow, R., *Edmund Frow, 1906-1997 – the making of an activist* (Salford: Working Class Movement Library, 1999) p.33

³⁰⁰ Eyre, Heaps and Townsin, *Crossley* p.93

Conclusion

Examination of organised labour in the Manchester motor industry shows some similarities and differences compared to other areas and manufacturers around the country. Within Manchester significant producers such as Belsize and Crossley had high levels of union membership, whereas firms such as Ford and WOC succeeded largely in having a union free workforce, which helped avoid disputes and allowed for more flexible decision making by management. We also see in both the number and scale of incidents at Crossley and Belsize that union disputes caused considerable delays and problems for the firm both in optimising wartime production and in the intense competition in the post-war period. While these issues were not the only factor that saw these firms facing mixed fortunes in the post-war years, they certainly played a significant part, especially in the demise of Belsize, one of Manchester's oldest and most prestigious firms. Indeed as Percival Perry, Ford's managing director, moaned in 1912, "Manchester is... the hot bed of trade unionism,"³⁰¹ even though Ford had broken up shop-floor organisation after the strike of 1912-1913. As McIntosh argues, they had to combat this by paying very high wages.³⁰² Manchester's long union traditions contrasted to Coventry where a lack of similar tradition led to the virtual collapse of AEU and WU membership in the district. Whether firms were like a closed shop like Ford or heavily unionised like Belsize, union organisation in Manchester certainly played its part in company fortunes and decision making.

³⁰¹ *Manchester Evening News* 11/12/12

³⁰² McIntosh, *Ford at Trafford Park* p.214

3.7 – Chapter 3 Conclusion

Exploring the Manchester motor industry has highlighted gaps in knowledge. This chapter has shown the importance of studying the boom in experimental, small-scale manufacturers during the emergence of the automobile; which from an economic point of view were insignificant, explaining the scant reference to this brief period in national histories. However, examining the origins, actions and exits of these firms has shown that they played an important part locally in both promoting and facilitating the emergence of motoring as an activity. This can also be seen in Chapter 1 when it was found that men in the trade formed a large number of members of the local automobile clubs that sprang up around the region; and in Chapter 2 when manufacturers competed in heavy traffic trials to improve goods haulage by road. This local significance continued, and we see this through the role played by agents and dealers who acted as local centres for particular manufacturers of the automobile. The way in which the industry developed, with national and international manufacturers' vehicles sold at a local level by independent sellers, meant that the location of manufacturers was not particularly important in terms of connecting with the user. More important was the economy of factory space, location for transporting products and the regional level of engineering union organisation. Coventry and indeed, Manchester, developed as a centre for automobile production, but there was no real benefit for proximity. Indeed, we have demonstrated that labour organisation often made it disadvantageous. It has been found that national events such as the iron moulder's strike of 1919-1920 and the EEF Lockout of 1922 affected firms in radically different ways and a closer analysis of other firms' experience during these two events would certainly benefit our understanding of the automobile industry during this period and could lead to a re-evaluation of these events' overall impact of the UK's motor industry. Most striking is the contrast between Belsize, massively affected by both the iron moulders' strike and the EEF Lockout, and Ford, who were almost unaffected.

We have also shown how automobile manufacturing emerged from a variety of different backgrounds. While bicycle manufacturing was similar, and therefore lent itself to automobile manufacturing, we have seen how manufacturers were influenced

by customers, and by use: the most famous example being Royce, turning to manufacturing after experiencing motoring. These enthusiastic small to medium sized businesses were the first to begin manufacture before larger firms sought to produce in volume and develop widespread dealership networks that saw small manufacturers cease manufacturing, with many using their expertise either to work for larger firms or become agents and repairers in their local area.

Conclusion

Today the automobile is a dominant economic and political force in the UK. Production and jobs in the industry are important factors in national economic performance, with an estimated 800,000 jobs in the sector. The political importance of the industry is demonstrated as the UK grapples with its vision for Brexit. The pressure on government by the SMMT and many MPs whose constituents benefit from the industry is for a close customs arrangement with the European Union that will best safeguard the industry, in which the unfettered import of components and export of finished cars is of great importance.¹ The automobile also dominates visions of the future of mobility: electric rather than the combustion engine or driverless automated automobiles. These visions are reflected both in the actions of policy makers, the experiments of technology companies and general media discourse on the subject. How this change happens, when and even if, is widely debated.

This thesis, a historical investigation of an emerging technology, can contribute towards current debates surrounding technological substitution and directional change. There are striking similarities between the visions, imaginaries, policy-making decisions and resistances explored in this study and the present, and future of potential automobile technologies. We noted how favourable policies and legislative changes came about in 1896 when the horseless carriage was a novel experimental product used and manufactured by very few people. This has been shown to be motivated by visions of technology improving society and with the aim of encouraging industry,² an aspect of automobilism that has been a constant throughout the period of this research. Similarly in 2017 the Conservative government introduced legislation in favour of testing driverless cars with the “Automated and Electric Vehicle Bill” introduced by government minister John Hayes to encourage the potential industry in the UK. However, it was also, for Hayes,

an opportunity to give access to cars to those who have never had them – the profoundly disabled, the elderly, the infirm, and the partially sighted and the blind.

¹ Anonymous, “Industry Topics Brexit, SMMT position” <https://www.smmt.co.uk/industry-topics/brexit/> accessed 5/6/2018; Angela Monahan, “UK car industry must be at the heart of Brexit negotiations, say MPs” 1/3/2018 *Guardian* <https://www.theguardian.com/business/2018/mar/01/uk-car-industry-must-be-at-the-heart-of-brexit-negotiations-says-mps/> Accessed 6/6/2018

² Plowden, *The motor car and politics* pp.21-22

They have not been able to drive, and they have relied on others to drive them, but they will suddenly have the opportunity of car ownership, which has been denied them for so long by the nature of their disability or their need. That is the sort of future I envisage.³

These sociotechnical imaginaries of societal benefit directly mirrored Sir David Salomon's vision at the opening meeting of the LSPTA in 1896. We also see how Mom's argument surrounding the emergence of automobilism is true for modern emerging automobile technologies:

the car enjoyed greater importance in societal discourse than its quantitative or economic presence would suggest... Expectations played a crucial role in the history of individual motorized mobility.⁴

Expectations preceded technological development. Businessmen connected with the LSPTA believed in the future business opportunities that the automobile represented and thus looked to encourage manufacture and use through trials and tenders. Similar themes can be seen today, as firms such as Uber indicate their belief in the future direction of technology by trialling driverless technology, and ordering thousands of driverless cars that have yet to be developed.⁵

Conversely, there are also very similar concerns surrounding the potential of the new technology. In 1896 debate on legislation raised concerns over the impact of motorised vehicles on the horse industry, the cost to the potential user and the dangers to the public.⁶ These concerns are mirrored today, surrounding the employment of drivers and the dangers of driverless software, including tampering and delegating emergency moral decision making to software.⁷

³ "Automated and Electric Vehicles Bill", *Second Reading* parliamentary debate in the House of Commons 23/10/2017

⁴ Mom, *Atlantic Automobilism* p.77

⁵ Anonymous, "Budget 2017: UK's driverless cars stuck on testing roundabout" *The Conversation* 21/11/2017 <https://theconversation.com/budget-2017-uks-driverless-cars-stuck-on-testing-roundabout-87805/> Accessed 7/6/2018

⁶ Plowden, *The motor car and politics* p.22

⁷ "Automated and Electric Vehicles Bill", *Second Reading* parliamentary debate in the House of Commons 23/10/2017; House of Lords, Science and Technology Select Committee 2nd report, *Connected Autonomous Vehicles: the future* 15/3/2017 pp.26-27

A recent Nissan-made video envisages a utopian vision of 2040 built around driverless car technology with lines such as “IMAGINE a world with zero auto fatalities and zero emissions” and “IMAGINE a vehicle that’s in harmony with its surroundings” in a similar way to the drawn imaginings of the nineteenth and early twentieth centuries which provided visions for the way in which the automobile would revolutionise cities and our individual travel.⁸ “Progress” and “modernity” have been identified by this thesis as integral to the development of automobilism in middle-class aspiration and the image of cities and the visions of town planners. However, the reality of the ubiquity of the car has often been at odds with these visions. As described by mobility historian McShane:

Americans made the car an idol; they relied on a machine to solve problems not reconcilable by a machine. The liberating effects have been powerful and important... but they also chained consumers to the jobs needed to pay for their cars... the overall urban environmental effects have been horrible... The modern American metropolis is a socially and politically fragmented, gas-guzzling environmental nightmare... traffic jams have gotten worse.⁹

Overall, this study has explored a number of aspects or gaps in our understanding of the diffusion of the automobile, which can be summarised by the various section and chapter conclusions. The thesis has shown the value of the historical study of technology and its interaction with society, building on recent work by scholars such as Mom, McShane, Jasanoff, Kim and Pinch. Furthermore, it fits as a case study in the emerging interdisciplinary field of Science and Technology studies, which can benefit from the historicising of modern theoretical concepts such as the “social co-construction of technology” or “socio-technical imaginaries”.

In taking these relatively new theories from the field of science and technology studies this thesis has challenged existing conclusions about the automobile, as well opening up new avenues of exploration. For example, in this thesis we have shown the need to consider other explanations for the diffusion of both motoring and motor manufacturing. Similarly, alternative factors have been explored for some key aspects

⁸ “Imagine a 2040 future” 7/1/2018 <https://www.youtube.com/watch?v=FqOC6DF8bwE> Accessed 7/6/2018; Jeremiah, *Representations of British motoring* pp.15-16 and pp.128-133

⁹ McShane, *Down the asphalt path* p.228

of motoring that have previously been explained by economic arguments. These include the rise and decline in fortunes of Manchester-based firms such as Ford and Belsize, the notion that diffusion was based largely on pricings, explaining the entry and exits of early firms, explaining the emergence of commercial motoring, and exploring the replacement of trams with buses. In this regard it is suggested that there is a need to re-evaluate the economic scholarship, as its conclusions have been challenged, or at least complicated, following the development of scholarship on mobilities and the interaction between technology and society.

Bibliography

Primary Sources

Books

Anonymous, *Census of England and Wales 1911: General Report with Appendices* (London: His Majesty's Stationery Office, 1917)

Anonymous, *Census of England and Wales 1921: General Report with Appendices* (London: His Majesty's Stationery Office, 1927)

Federation of Engineering and Shipbuilding Trades of the United Kingdom Journal (1922) (will need proper reference)

Manchester and District Joint Town Planning Advisory Committee, *Report upon the Regional Scheme* (Manchester: Henry Blacklock and Co., 1926)

Nicholas R., *City of Manchester Plan 1945, abridged version* (Jarrold and Sons: Norwich and London: 1945)

Shrapnell Smith E., ed., *Liverpool Trials of Motor Vehicles for Heavy Traffic Judges Report* (Winstanley and Watkins, Liverpool: 1898)

Trade Directories

Slater's Manchester, Salford and Suburban trade directory (Slater's Directory Limited: Manchester) Years 1890-1939

The Motor and Cycle Trade Directory of Great Britain and Ireland (London: Rockliffe Bros, 1906)

Newspapers and Magazines

Aberdeen Press Journal

Athletic News

Ballymena Observer

Belfast-News Letter

Brighton Gazette

Burnley Express

The Bystander

Denbighshire Free Press

Derbyshire Courier

Dublin Daily Express

Dundee Evening Telegraph

Edinburgh Evening News

The Engineer

Falkirk Herald

The Graphic

Isle of Wight County Press

Lancashire Evening Post

Leamington Spa Courier

Liverpool Daily Post

The London Gazette

The Manchester Guardian

Manchester Courier

Motor Car Manufacturers' Art Journal

Preston Herald

The Producer

Punch

Scotsman

Sheffield Evening Telegraph

Sketch

The Sphere

The Sporting Times

The Tatler

Wellington Journal

Yorkshire Post

Weekly and monthly cycling and automobile publications

The Autocar

The Automotor and Horseless Carriage Journal

Commercial Motor

Cyclist Touring Club Gazette

Ford Times

Fording

The Motorcar Journal

The Motorcycle

Archive Sources

Cheshire Records Office – Fodens collection

Chetham Library Archives – Herbert Morton collection

HSBC archive – Belsize receivership papers

Liverpool Library archives – Documents relating to the Liverpool Self-Propelled Traffic Association

Manchester Art Gallery – Artwork by Roger Oldham

Manchester Central Library Archives – A variety of sources including the papers of the Special Committees and the *Manchester Cycle and Motor Show Catalogue* (1899)

Manchester Local Image Collection – A number of local images, particularly those of Manchester's Streets

Museum of Liverpool – “Liver” car

Science and Industry Museum Archives (YMS) – The Cockshoot collection, Quicks collection, Crossley Motors collection and William Ridings collection

North West Film Archive (NWFA) – An assortment of cine films from the 1920s and 1930s

University of Liverpool Library Archive – Papers relating to Simpson and Bodman, later Simpson and Bibby

Warwick Modern Record Centre – Papers relating to Crossley Motors

Working Class Movement Library – ASE and AUE regional minute books and other trade union material

Secondary Sources

Adeney, M., *The Motor Makers. The Turbulent History of Britain's Car Industry* (London: Fontana, 1989)

Archer, J., "The Manchester Automobile Club Reliability Run, 1907-14" in *Aspects of Motoring History*, Vol.13 (2017) pp.49-70

Aspray, W., "One Hundred Years of Car Buying" in Aspray, W. and Hayes, B. M., *Everyday Information* (London: MIT Press, 2011)

Bacon, R. and Hallworth, K., *The British Motorcycle Directory: Over 1,100 Marques from 1888* (Marlborough, UK: Crowood Press, 2004)

Barker, T. C. and Gerhold, D., *The Rise and Rise of Road Transport, 1700-1990* (Cambridge: Cambridge University Press, 1993)

Barker, C., Tuckett, N. and Lilleker, D., *The English Model T Ford Volume 2 – Beyond the Factory* (Keighley: Model T Ford Register of Great Britain, 2014)

Beaven, B., *The Growth and Significance of the Coventry Car Component Industry, 1895-1939* (De Montford University: PhD Thesis, 1994)

Bell, K., "Poop, poop! – An Early Case of Joy-riding by an Upper Class Amphibian" in Thoms, D., Holden, L. and Claydon, T., eds. *The Motor Car and Popular Culture in the 20th Century* (Aldershot: Ashgate, 1998) pp.69-83

Bennett, E., *Thousand Mile Trial* (East Sussex: Elizabeth Bennett, 2000)

Benson, J., *The rise of consumer society in Britain, 1880-1980* (London: Longman, 1994)

Bijker, W. E., *Of Bicycles, Bakelites, and Bulbs, Towards a Theory of Sociotechnical Change* (London: MIT Press, 1997)

Bowden, S. and Turner, P., "The Demand for Consumer Durables in the United Kingdom in the Interwar Period" in *The Journal of Economic History*, Vol.53:2 (1993) pp.244-258

Brendon, P., *The Motoring Century: The Story of the Royal Automobile Club* (London: Bloomsbury, 1997)

Brooks, R., *Motor Car Coachwork by Cockshoot of Manchester* (Unpublished MA dissertation: Manchester University, 1979)

Brooks, R., *Quicks: the first 75 years* (Manchester: H & J Quick Ltd., 1987)

Brown, K., "'An absorbing epic'? The development of toy-manufacturing in the North West, c1851-1931" in Horner, C. ed., 'Business in the North-West', *Manchester Regional History Review*, Vol.21 (Exeter: Short Run Press, 2009)

Brumhead and T. Wyke, *Moving Manchester* (Manchester: Lancashire and Cheshire Antiquarian Society, 2004)

Church, R., *Herbert Austin. The British Motor Car Industry to 1914* (London: Europa, 1979)

Church, R., "Markets and marketing in the British motor industry before 1914, with some French comparisons" in *Journal of Transport History*, Vol.3 (March 1982) pp. 1-20

Church, R., *The rise and decline of the British motor industry* (Cambridge: Cambridge University Press, 1994)

Clark, R. H., *The Development of the English Steam Wagon* (Norwich: Goose and Son, 1962)

Clarke, T., "The 1900 Trail and Manchester: how local motoring spurred the beginnings of Rolls-Royce" in Bennett, E., ed. *Thousand Mile Trial* (East Sussex: Elizabeth Bennett, 2000) pp.173-182

Clarke, T., *Hollingdrake, coachbuilders: a century in Stockport* (Unpublished, 2002)

Clausager, A., "Labour Relations" in Georgano, N., Baldwin, N., Clausager, A., and Wood. J., eds. *Britain's Motor Industry the First Hundred Years* (Sparkford: G. T. Foulis & Company, 1995) pp.184-209

Claydon, T., "Trade Unions, Employers and Industrial Relations in the British Motor Industry c.1919-45" in *Business History* Vol.29:3 (1987) pp.304-324

Clayton, N., "A Missed Opportunity? Bicycle Manufacture ring in Manchester 1880 – 1900" in D. Brumhead and T. Wyke (eds.), *Moving Manchester* (Manchester: Lancashire and Cheshire Antiquarian Society, 2004) pp.178-193

Colli, A., *The History of Family Business, 1850-2000* (Cambridge: Cambridge University Press, 2002)

Dupree, M., "Foreign Competition in the Interwar Period" in Rose, M. B. ed., *The Lancashire Cotton Industry* (Lancashire County Books, Preston: 1996) pp. 264-295

Evans, M. H., *In the Beginning – the Manchester origins of Rolls-Royce* (Derby: Rolls-Royce Heritage Trust, 2004)

Eyre, M., Heaps, C. and Townsin, A., *Crossley* (Oxford: Oxford Publishing Company, 2002)

Farnie, D. A., *The English cotton industry and the world market, 1815-1896* (Oxford: Clarendon Press, 1979)

Farnie, D. A., *The Manchester Ship Canal and the rise of the Port of Manchester, 1894-1975* (Manchester: Manchester University Press, 1980)

Fenelon, K. G., *The Economics of Road Transport* (London: George Allen and Unwin, 1925)

Foreman-Peck, J., Bowden, S., and McKinlay, A., *The British Motor Industry* (Manchester: Manchester University Press, 1995)

Fowler, A., *Lancashire cotton operatives and work, 1900-1950: a social history of Lancashire cotton operatives in the twentieth century* (Aldershot: Ashgate, 2003)

Frow, R., *Edmund Frow, 1906-1997 – the making of an activist* (Salford: Working Class Movement Library, 1999)

Georgano, N., *A History of the London Taxicab* (Newton Abbot: David and Charles, 1972)

Georgano, N., Baldwin, N., Clausager, A., and Wood, J., *Britain's Motor Industry the First Hundred Years* (Sparkford: G. T. Foulis & Company, 1995)

Georgano, N., *The Beaulieu Encyclopaedia of the Automobile* (London: Routledge, 2000)

Georgano, N., *The Beaulieu Encyclopaedia of the Automobile: Coachbuilding* (London: Routledge, 2001)

George, A. D. *The Manchester Motor Industry 1900-1938* (Manchester: Manchester Polytechnic Occasional Paper No.3, 1989)

George, A. D, "The rise and fall of the Manchester motor industry" in D. Brumhead and T. Wyke (eds.), *Moving Manchester* (Manchester: Lancashire and Cheshire Antiquarian Society, 2004) pp.194-209

Harrison, A. E., "Joint-Stock Company Flotation in the Cycle, Motor-Vehicle and Related Industries 1882-1914", *Business History*, Vol.23 (1981) pp.165-190

Hobsbawm, E. J., *Industry and Empire* (London: Pelican, 1969)

Horner, C., "'Modest Motoring' the Emergence of Automobility in the United Kingdom" in *Transfers: Interdisciplinary Journal of Mobility Studies*, Vol.2 (2012) pp.56-82

Hume, J. R., "Engineering" in Langton, J. and Morris, R. J. eds., *Atlas of Industrialising Britain 1780-1914* (London: Methuen and Co., 1986) pp.136-139

Jackson, A. A., *The middle classes 1900-1950* (Nairn:David St. John Thomas, 1991)

Jasonoff, S. and Kim, S., *Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea*, in *Minerva*, Vol.47 (2009) pp.119-146

Jasonoff, S. and Kim, S., *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power* (London: The University of Chicago Press, 2015)

Jefferys, J. B., *The story of the engineers: 1800-1945* (New York: Johnson Reprint Corporation, 1970)

Jeremiah, D., "Filling Up: The British Experience 1896-1940" in *Journal of Design History* Vol. 8:2 (1995) pp.97-116

Jeremiah, D., *Representations of British motoring* (Manchester: Manchester University Press, 2007)

Jeremiah, D. "Motoring and British Countryside", in *Rural History* Vol. 21:2 (2010) pp.233-250

Joyce, J., *Roads and Rails of Manchester 1900-1950* (London: Ian Allan, 1982)

Kennett, P., *The Foden Story* (Cambridge: Patrick Stephens, 1978)

Kidd, A., "From Township to Metropolis" in Kidd, A. and Wyke, T. eds. *Manchester: Making the Morder City*, (Liverpool University Press: Liverpool, 2016) pp.299-346

Kinney, T. A., *The Carriage Trade: Making Horse-Drawn Vehicles in America* (Baltimore: John Hopkins University Press, 2004)

Kline, R. and Pinch, T., "Users as agents of technological change: the social construction of the automobile in the rural United States" in *Technology and culture*, Vol.37:4 (1996) pp.763-795

Kline, R., "Resisting Consumer Technology in Rural America: The Telephone and Electrification", in Oudshoorn, N. and Pinch, T., eds. *How users matter: the co-construction of users and technology* (London: MIT Press, 2003) pp.51-66

Koerner, S., "The British motor-cycle industry during the 1930s" in *Journal of Transport History*, Vol.16 (1995) pp.55-76

Koerner, S., "Four wheels good, two wheels bad: the motor cycle versus the light motor car – 1919-39" in Thoms, D., Holden, L., Claydon, T., eds. *The Motor Car & Popular Culture in the 20th Century* (Aldershot: Ashgate, 1998) pp.151-176

Law, M. J., *The Experience of Suburban Modernity: How Private Transport Changed Interwar London* (Manchester: Manchester University Press, 2014)

Law M. J., "Charabancs and social class in 1930s Britain", in *the Journal of Transport History* Vol. 36:1 (2015) pp.41-57

Lawson, Z., "Wheels Within Wheels – the Lancashire Cycling Clubs of the 1880s and 90s'" in Crosby, A. G. ed., *Lancashire Local Studies: in honour of Diana Winterbotham* (Carnegie Pub, Lancaster, 1993) pp.123-146

Laybourn, K. and Taylor, D., *The Battle for the Roads of Britain: Police, Motorists and the Law c.1890s to 1970s* (London: Palgrave Macmillan, 2015)

Lazonick, W., *Business Organisation and the Myth of the Market Economy* (Cambridge: Cambridge University Press, 1991)

Lazonick, W. and Mass, W. "The Performance of the British Cotton Industry, 1870-1913", *Research in Economic History*, Vol. 9 (1984)

Lee, C. H., *Regional Economic Growth in the United Kingdom Since the 1880s* (Maidenhead: McGraw Hill, 1971)

Lewchuck, W. A., *American Technology and the British Motor Vehicle Industry* (Cambridge: Cambridge University Press, 1987)

Lyddon D., *Craft Unionism and Industrial Change: a Study of the National Union of Vehicle Builders Until 1939* (University of Warwick: PhD thesis, 1897)

Makepeace, C., *Oldest in the World: The Story of Liverpool Road Station* (Manchester: Manchester Region Industrial Archaeological Society, 1979)

Marr, P., "The geography of the British motorcycle industry, 1896-2004" in *The Journal of Transport History*, Vol.33:2 (2012) pp.163-185

Marrison, A., "Indian Summer" in M. B. Rose ed., *The Lancashire Cotton Industry* Lancashire (County Books: Preston, 1996) pp.238-264

Mass, W. and Lazonick, W., "The British Cotton Industry and International Competitive Advantage: The State of the Debates" in *Business History*, Vol.32:3 (1990) pp.9-65

McIntosh, I., *Ford at Trafford Park*, PhD Thesis, The University of Manchester (1991)

McIntosh, I., "'It was worse than Alcatraz': working for Ford in Trafford Park" in *Manchester Regional History Review* Vol.9 (1995) pp.66-76

McLeay, P. "The Wolverhampton Motor Car Industry 1896-1937", *West Midlands Studies* 8, Winter (1974)

McNeil, R. and Nevell, M., *A guide to the industrial archaeology of Greater Manchester* (England: Association for Industrial Archaeology, 2000)

McShane, C., *Down the asphalt path: the automobile and the American city* (New York: Columbia University Press, 1994)

McShane, C. and Tarr, J. A., "The Decline of the Urban Horse in American Cities" in *The Journal of Transport History*, Vol.24:2 (2003) pp.177-198

Merriman, P., *Mobility, Space and Culture* (Abingdon: Routledge, 2012)

Michie, R. C., "Options, Concessions, Syndicates, and the Provision of Venture Capital" in *Business History*, Vol.23:2 (1981) pp.147-164

Millward, A., *Factors Contributing to the Sustained Success of the UK Cycle Industry 1870-1939*, PhD Thesis, University of Birmingham (1999)

Miller M., and Church, R. "Motor Manufacturing" in Buxton, N., and Aldcroft, D. eds. *British Industry Between the Wars* (London: Scolar, 1975)

W. J. Mitchell, W. L., Borroni-Bird, C. E., Burns, L. D. and Hainle, B. E., *Reinventing the Automobile : Personal Urban Mobility for the 21st Century* (MIT Press: Cambridge, 2010)

Mom, G., *The Electric Vehicle* (Baltimore: John Hopkins, 2004)

Mom, G., "Translating Properties into Functions (and Vice Versa): Design, User Culture and the Creation of an American and a European Car (1930-70)" in *Journal of Design History*, Vol.21 (2008) pp.171-181

Mom, G., *Atlantic Automobilmism. Emergence and Persistance of the Car 1895-1940* (New York: Berghahn, 2015)

Montagu, Lord, "Bus Ride to Oblivion: the Sad Tale of the Crossley", in *Lost Causes of Motoring* (London: Cassell, 1966) pp.59-76

Moran, J., "Crossing the Road in Britain, 1931-1976" in *The Historical Journal* Vol.49:2 (2006) pp.477-496

Moser, K., "The dark side of automobilism" in *Journal of Transport History*, Vol.24:2 (2003) pp.238-258

Mutch, A. "Brewing in the North West, 1840-1914: sowing the seeds of service-sector management?" in Wilson, J. ed., 'Business in the North-West', *Manchester Regional History Review*, Vol.21 (Exeter: Short Run Press, 2009)

Nicholson, T. R., *The Birth of the British Motor Car, 1769-1897*, 3 Volumes (London: Macmillan, 1982)

Nixon, St. J. C., *The Story of the S.M.M.T. 1902-1952* (London: Society of Motor Manufacturers and Traders, 1952)

Norris, J., and Lomax, S., *Early Days: memories of the beginning of automobile engineering in South Lancashire and Cheshire* (Manchester: George Faulkner and Sons, 1949)

O'Connell, S., *The Car in British Society, Class, Gender and Motoring, 1986-1939* (Manchester: Manchester University Press, 1998)

O'Connell, S., "Motoring and Modernity", in Carnivali, F. and Strange, J-M. eds. *20th Century Britain: Economic, cultural and social change* (Harlow: Pearson, 2007) pp.111-126

Oudshoorn, N. and Pinch, T., *How users matter: the co-construction of users and technology* (London: MIT Press, 2003)

Pinch, T., "Giving Birth to New Users: How the Minimoog Was Sold to Rock and Roll" in Oudshoorn, N. and Pinch, T., eds. *How Users Matter: the Co-construction of User and Technology* (London: MIT Press, 2003) pp.247-270

Pinch, T. J., and Bijker, W. E., "The social construction of facts and artifacts: or how the sociology of science and the sociology of technology might benefit each other", in *Social Studies of Science*, Vol.14 (1984) pp.399-431

Plowden, W., *The motor car and politics, 1896-1970* (London: Bodley Head, 1971)

Pooley, C. G., Turnbull, J., and Adams, M., *A Mobile Century? Changes in Everyday Mobility in Britain in the Twentieth Century* (London: Routledge, 2005)

Pooley, C. G., and Turnbull, J., "Coping with congestion: responses to urban traffic problems in British cities c.1920-1960" in *Journal of Historical Geography*, Vol.31 (2005) pp.78-93

Potter, C. T., *An Exploration of Social and Cultural Aspects of Motorcycling During the Interwar Period* (University of Northumbria: PhD thesis, 2007)

Pugh, P., *The Magic of a Name: the Rolls-Royce Story, Part 1: the First Forty Years* (London: Icon Books, 2000)

Reid, C., *Roads Were Not Built For Cars* (Washington DC: Island Press, 2015)

Richards, T., *The Commodity Culture of Victorian England* (California: Standford, 1990)

Riley, M., Lilleker, B., and Tuckett, N., *The English Model T Ford. A century of the Model T in Britain* (Keighley: Model T Ford Register of Great Britain, 2008)

Rose, M B., "The Family Firm in British Business" in Kirby, M. W. and Rose, M. B. eds. *Business Enterprise in Modern Britain: From the Eighteenth to the Twentieth Century* (London: Routledge, 1994)

Sandberg, L. G., *Lancashire in Decline: A Study in Entrepreneurship, Technology and International Trade* (Ohio: Ohio State University Press, 1986)

Saul, S. B., "The Motor Industry in Britain to 1914", *Business History*, Vol.5 (1962) pp.22-44

Scharff, J. S., *Taking the Wheel* (New York: Macmillan, 1991)

Schmucki, B., "Against the 'Eviction of the Pedestrian' The Pedestrians' Association and Walking Practices in Urban Britain after World War II" in *Radical History Review*, Vol.114 (2013) pp.113-138

Tarr, J. A., and McShane, C., "The Horse as an Urban Technology" in *Journal of Urban Technology*, Vol.15:1 (2008) pp.5-17

Thoms, D., and Donnelly, T., *The motor car industry in Coventry since the 1890's* (London: Croom Helm, 1985)

Thompson, F. M. L., "Nineteenth-Century Horse Sense" in *The Economic History Review*, Vol.29:1 (1976) pp.60-81

Timmins, G., *Four centuries of Lancashire cotton* (Preston: Lancashire County Books, 1997)

Timmins, G., *Made in Lancashire: a history of regional industrialisation* (Manchester: Manchester University Press, 1998)

Tjong Tjin Tai, S., "Building Carriage, Wagon and Motor Vehicle Bodies in the Netherlands: The 1900-40 Transition", *The Journal of Transport History* Vol. 36:2 (2015) pp.188-208

Tolliday, S., "Management and Labour in Britain 1896-1939", in Tolliday, S. and Zeitlin, J., eds. *The Automobile Industry and its Workers* (Cambridge: Polity Press, 1986) pp.29-56

Tracy, H., *Father's First Car* (London: Routledge and Kegan Paul, 1966)

Tragatsch E., *The New Illustrated Encyclopedia of Motorcycles* (London: Quarto, 1992)

Tripp, B. H., *Renold Chains: a history of the company and the rise of the precision chain industry 1879-1955* (London: Allen & Unwin, 1956)

Turner, H. A., *Labour relations in the motor industry: a study of industrial unrest and an international comparison* (London: Allen and Unwin, 1967)

Turvey, R., "Horse traction in Victorian London" in *The Journal of Transport History*, Vol.26:2 (2005) pp.38-59

Urry, J., *The Tourist Gaze* (London: Sage, 1990)

Walton, J. K., *Blackpool Landlady* (Manchester: Manchester University Press, 1978)

Watney, M., *The elegant carriage* (London: Allen, 1961)

Wilson, J. ed., "Business in the North-West", *Manchester Regional History Review*, Vol.21 (Exeter: Short Run Press, 2009)

Whitehead, D., *Gardners of Patricroft: 1868-1968* (Great Britain: Newman Neame, 1968)

Worthington-Williams, M., "Sound as a Bell" in *Old Motor* (1970s) pp.150-157

Worthington-Williams, M., "The Belsize from Manchester" in *The Automobile*, Vol.1:12 (February, 1984) pp.28-32

Worthington-Williams, M., "The Harper Runabout" in *The Automobile*, November (1996)

Worthington-Williams, "From 'new motoring' to the microcar" in *Aspects of Motoring History*, Vol.13 (2017) pp.5-20

Wyatt, R. J., "The Eagle Engineering & Motor Co. Ltd." in *Old Motor and Vintage Commercial* (September 1963) pp.105-109

Wyatt, S., "Non-Users Also Matter: The Construction of Users and Non-Users of the Internet" in Oudshoorn, N. and Pinch, T., eds. *How users matter: the co-construction of users and technology* (London: MIT Press, 2003) pp.67-80

Wyatt, S., "Technological Determinism Is Dead Long Live Technological Determinism", in Hackett, E. J. et. al. eds. *The Handbook of Science and Technology Studies* (MIT: London, 2008) pp.165-180

Wyke, T., "Rise and Decline of Cottonopolis" in Kidd, A. and Wyke, T., eds. *Manchester: making the modern City* (Liverpool: Liverpool University Press, 2016) pp.69-118

Parliamentary papers

"Automated and Electric Vehicles Bill", *Second Reading* parliamentary debate in the House of Commons 23/10/2017

House of Lords, Science and Technology Select Committee 2nd report, *Connected Autonomous Vehicles: the future* 15/3/2017 pp.26-27

Internet sources

Anonymous, "Irwell – Manchester Cycle Manufacturing Company Limited" *Elm City Commuter*, <https://elmcitycommuter.wordpress.com/2010/03/19/irwell-%E2%80%93-manchester-cycle-manufacturing-company-limited/> (date accessed 26/01/2017)

Yorke, R. *Flying Success at Freshfield, Formby in 1910*, 7 May 2010. Accessed 18/8/2017

http://www.formbycivicsociety.org.uk/2010_07_flyingsuccessatfreshfield.html

<http://www.madeinpreston.co.uk/Road/leylandinfo.html>

Footage of the Ben Nevis climb, descent and parade. Parade with flag 5:30-6:30

Accessed 11/4/2018 <https://www.youtube.com/watch?v=jaNgYhvmtzA>

Anonymous, "Industry Topics Brexit, SMMT position"

<https://www.smmt.co.uk/industry-topics/brexit/> accessed 5/6/2018

Angela Monahan, "UK car industry must be at the heart of Brexit negotiations, say MPs" 1/3/2018 *Guardian* <https://www.theguardian.com/business/2018/mar/01/uk-car-industry-must-be-at-the-heart-of-brexit-negotiations-says-mps/> Accessed 6/6/2018

Anonymous, "Budget 2017: UK's driverless cars stuck on testing roundabout" *The Conversation* 21/11/2017 <https://theconversation.com/budget-2017-uks-driverless-cars-stuck-on-testing-roundabout-87805/> Accessed 7/6/2018

"Imagine a 2040 future" 7/1/2018 <https://www.youtube.com/watch?v=Fq0C6DF8bwE> Accessed 7/6/2018

Appendix 1 – List of Automobile Manufacturers in the North-West

Name	Date of operation	Location(s)	Previous association	Vehicle Type	References and notes
Anderson J.	1906 at least	Lower Broughton Road, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> , 1906
Armstrong-Whitworth	1906-1913 Then In Manchester (1911-1913)	Openshaw, Manchester body works (1911) and showroom in Clayton	Engineering (hydraulics, armaments, ships)	Motorcars	Georgano (2000) p.?. ; A.D George (The DECLINE OF THE Motor Industry between the wars - Some Case Studies 1991.333/2/2
Autocar Contruction Co. Ltd.	1902 to at least 1906	Openshaw, Manchester	??	Motorcars and light commercial vehicles	Clarke (2000); Ad for a Clerk in <i>Manchester Guardian</i> 1902; Article on 1903 Crystal Palace show - "Hermes" Car; <i>Slater's Manchester and Salford Trade directory</i> ,1903; <i>Motor and Cycle Trade Directory</i> , 1906
AVRO - A. V. Roe & Co	1919-1924	Newton Heath	Aircraft engineering	Cyclecars	Georgano (2000) p.?.; Eyre et al. (2002) pp.105-107
W. W.Batty and Co.	1906 at least	Eccles New Road, Salford	Bicycles	Motorcycles	<i>Motor and Cycle Trade Directory</i> , 1906
Baxendale and Company	1899-1906 at least	Miller Street, Manchester	A variety of consumer goods	Motorcycles	Manchester Central Library Archives - <i>Manchester Cycle and Motor Show Catalogue</i> 1899 p.22; also <i>Motor and Cycle Trade Directory</i> , 1906

Bell Brothers?	1905-1919	Stretford Road, Hulme; Later Ravensthorpe and 41 Corporation Street, Manchester	General Engineering	Motorcars	A.D.George (1989) p.18; MEN 22 Feb 1907; MG 25 Feb 1905; Sold business to the CWS in 1919
Belsize Motor Company; before 1906 the Belsize Motor and Engineering Company; from 1896-1903 Marshall and Company	1896-1925	Clayton Lane, Openshaw, Manchester; Showrooms on Wilson street.	General Engineering; scientific equipment	Motorcars, tricycles, light and heavy commercial vehicles	Multiple sources, too numerous to list. Including archive material at HSBC archive for the firms receivership period
Bennett and Carlisle (later Newton and Bennett, see below entry)	1901-1903	239 and 241 Deansgate, Manchester	Cycle agents	Motorcars	<i>Slater's Manchester and Salford Trade directory</i> 1903; advert in <i>The Autocar</i> 2/3/1901; 27/4/1901
Beswick Cycle and Motor Company	1902 at least	Beswick, Manchester	??	Motorcycles	<i>The Motorcar Journal</i> 28/6/1902 p.367
Beyer, Peacock and Company	1903-c.1906	Gorton, Manchester	Locomotive manufacturers	Heavy Commercial vehicles	<i>Commercial Motor</i> 8/2/1906; Clark (1962) p.82

J.B. Bindloss Junior and Co.	1901	Egerton St. Salford	??	Motorcars	<i>Slater's Manchester and Salford Trade directory</i> 1901
Bolton Motor Wagon Co. (Before James Bradshaw and Sons.)	c.1901-1916	Turk Street, , Bolton	Machine tools	Heavy commercial vehicles	Clark (1962) p.11
Bracegirdle Cycle Co.	1899- c.1906	Mercury Cycle Works, 56 Alexandra Road Manchester	Bicycle Manufacturers	Motorcycles	Manchester Central Library Archives - <i>Manchester Cycle and Motor Show Catalogue</i> 1899 p.43; <i>Motor and Cycle Trade Directory</i> , 1906
Bradbury and Co.	1897-1925	Oldham, Wellington Road "Wellington Works"; Also showrooms 7 Deansgate, Manchester	Sewing Machine, machine tools and bicycles	Motorcycles and motorcars	Numerous including: Norris and Lomax (1949) p.38; Museum of Science and Industry - YMS1999/74 ; Clarke (2000); <i>The Autocar</i> 29/10/1898 p.690; <i>Motor and Cycle Trade Directory</i> , 1906
British Commercial Lorry and Engineering Co.	1915-1922	Ashburton Road Trafford Park, Whalley Range body works then 66-68 Bridge street (sales room?); County Motor Works, Salford	Manager previously worked at another commercial vehicle company	Motorcars, light and heavy commercial vehicles	Numerous entries in the <i>Commercial Motor</i> ; Working Class Movement Library - AEC minutes WCML
Broadbent, S.	1906 at least	1177 Chester Road	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> , 1906

Brock Cycle and Motor Depot	1906 at least	Stockport Road, Longsite, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory, 1906</i>
Brooks and Spencer	1913	Levenshulme	??	Cyclecars	Georgano (2001)
Brown G. W.	1906 at least	Burton's Buildings, Fallowfield Station, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory, 1906</i>
Bullock, F.	1899-at least 1903	23 Bury New Road, Strangeways	Bike parts and cycle manufacturer	Motorcars?	<i>Slater's Manchester and Salford Trade directory 1903</i> p.32 Manchester Central Library Archives - <i>Manchester Cycle and Motor Show Catalogue 1899</i>
Bunting, E.	1899 at least	Market Street, Hyde	??	Motorcycles	Manchester Central Library Archives - <i>Manchester Cycle and Motor Show Catalogue 1899</i>
Butterworth, T.	1906	187 Jackson Street, Hulme, Manchester		Motorcycles	<i>Motor and Cycle Trade Directory, 1906</i>
Carter Brothers Ltd.	1906-several years	Oakenrod, Rochdale	General Engineering.	Heavy commercial vehicles	Clark (1962) p.12-13
Century Engineering and Motor Co. Ltd.	1899-1906 (left for London c.1900)	London & Manchester, Altrincham	Bikes	Tricycles and motorcars	Georgano (2000); numerous <i>The Autocar</i> adverts and articles; also Bennett (2000)
Clarke, F.	1895-1896	New Moston, Manchester		Motorcycles	Clarke (2000)
H. Cragg and Sons	1902 at least	Altrincham	Bicycles	Motorcycles	<i>The Motorcar Journal</i> 14/6/1902 p.334

Crossley motors	1903-1938 (later for others)	Gorton, Openshaw and Levenshulme Manchester	Engineering (gas engines)	Motorcars, light and heavy commercial vehicles	Multiple sources, too numerous to list; Dedicated publications by Eyre, Heaps and Townsin (2002); Montagu (1966); Archive material at Museum of Science and Industry and Warwick Modern Records Centre
Mr Cunningham	Dates unknown, one source 1905	Clitheroe	??	motorcars	MG 27 Feb 1905 – a vehicle called the “little Midland”
Dale Brothers, previous to 1904, Dale Brothers and Co.	1904-1909?	Great Western St. Rusholme, Manchester	Bicycle dealers	Motorcars	Several <i>Manchester Guardian</i> adverts, <i>Slater's Manchester and Salford Trade directory</i> , 1903 and 1909
Davy Engineering Ltd	1909-1911	Blake St. Hulme	General engineering	Motorcars	Letter written to A.D. George by Arthur Lomas in 1982 – Museum of Science and Industry archive - Correspondence file A1991.333\2\8; Article on 1910 Olympia Show in <i>Manchester Guardian</i> 7 Nov 1910; <i>Observer</i> Nov 1909
DOT Cycle and Motor Manufacturing Company	1903-2017	Ellesmere Street, Hulme, Manchester	Bicycle manufacturer	Motorcycles	Multiple sources, too numerous to list

Eagle Cycle and Motor Company	1901-1905	Oakfield Road; Manchester Road, West Timperley;	Bicycle manufacture and repair	Motor tricycles and motorcars	Georgano (2000); Wyatt (1963); Museum of Science and Industry Archive - YMS1991.444/3/2/10 A.D. Collection
Elton F.,	1906 at least	181 Chester Road, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> , 1906
Empress Motor Company	1907-1910	Longsite, Stockport Road, Manchester	??	Motorcars	Georgano (2000); Museum of Science and Industry - 1991.444/3/2/10 A.D. Collection also Empress Motor Company File Collections centre; multiple newspaper sources including <i>Manchester Guardian</i> 23/3/1908; <i>Manchester Guardian</i> 15/2/1907
Etesian Cycle and Motor Company	1903-1906 at least	206-212 Bury New Road Manchester	??	Motorcycles	<i>The Automotor Journal</i> 14/2/1903 p.188 and <i>Motor and Cycle Trade Directory</i> , 1906
Express Motor and Vehicle Manufacturing Company	Only source liquidated in 1904	180 Stockport Road	??	Motorcars	<i>Manchester Guardian</i> 3/5/1904
Fildes, H.	1906 at least	Mangnall St., Bury New Road, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> , 1906

Ford	In Manchester from 1911-1931	Trafford Park	American Car Company	Motorcars and Light Commercial vehicles	Multiple sources, too numerous to list, includes a number of dedicated publications
Frank Smith	1905?	Oxford Road	??	Commercial vehicles	Museum of Science and Industry - Empress Motor Company File - Collections centre. Frank Smith later worked for the Empress Motor Company
Gresham and Craven crane makers	1901-1903	Ordshall, Salford	Crane manufacturers	motorcars	Museum of Science and Industry – YMS???? - Cockshoot built the bodies
Harper	1921-1929	Cavendish Road, Gorse Hill, Stretford, Manchester	Aircraft manufacturing	Cyclecars	Georgano (2000); Worthington-Williams (1996)
Lancashire and Yorkshire Railway Company	1901-??	Horwich	Railway Company	Heavy commercial vehicles	Clark (1962) p.41
L. F. Harvey and Co.	One source showing car manufactured in 1907	Salford	??	Motorcar	<i>Motor Car Journal</i> 16/2/1907
Haynes Economy Motors	1912-1932	Hulme, Manchester	??		George (1989)
Haynes, F.	1906 at least	95 Medlock Street, Hulme, Manchester		Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906

Herbert Brady and Co	One source showing manufacturing in 1909	Deansgate		Cyclecar	MC 20/2/1909
Holland Bros	1895	Beswick, Manchester	??	Motorcar	Dubious claim to be the earliest motorcar made in Manchester from <i>Manchester Evening News</i> 14/5/1968
Horsfall and Bickham	1902-1909	Orchard Street, Pendleton	Textile Machinery	Motorcars and light commercial vehicles	Numerous scholarly and primary sources including: Georgano (2000); George (2004); Norris and Lomax (1949)
Howell, G. G.	1906 at least	84 Great Ancoats Street, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Hercules Motor Co. or Atlas Engineering Company	1903-c.1907	Atlas Works, Chapel Street, Levenshulme, Manchester	Machine tools	Heavy commercial vehicles	Museum of Science and Industry archive - Letter to J. Norris 1958 - 0197/9/6; also Clarke (1962) pp.110-113; Also <i>Manchester Guardian</i> 31 Dec 1904; Advert first appears in 1903, possible sale at auction of Atlas Works Levenshulme in 1907 ; Several <i>Commercial Motor</i> adverts.
Imperial motor Company / Imperial Autocar Manufacturing Company	1900-1912	Started Turners cycle shop on 291 Stretford Road, Hulme, Manchester, then Rusholme; also listed in 1903 TD as 58 Erskine St. Hulme	Bicycles, Check out Turners.	Motorcars	Georgano (2000); <i>Slater's Manchester and Salford Trade directory</i> 1903; <i>The Autocar</i> 11/5/1901; 10/8/1901

Jackson and Edwards	1910-1914	Altrincham, Timperley, 106 Manchester Road	Previous cycle and motor manufacturers	Motorcars	Museum of Science and Industry archive - A. D. George Collection - "In search of the Eagle" unpublished paper
Jones, A.	1906 at least	214 Moss Lane East, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Kitchine	Ceased manufacture in 1906	Radcliffe	??	Motorcars	Museum of Science and Industry - Letter to J. Norris - YMS0197/9/6
Ladas / J. Bowen	1905-1906	Didsbury; Albert St., James Bowen Cycle works address Birch Avenue, Heaton Moor.	Bicycles,	Cyclecars	Georgano (2000) <i>Motor and Cycle Trade Directory</i> 1906
Lancashire Electric Vehicle Company	1898-1899?	No address given	??	Motorcar	<i>The Autocar</i> 11/6/1898 p.370 Set up with the intention to manufacturer electric vehicles but no evidence that they completed a vehicle
Levenshulme Cycle and Motor Depot	1905-1906?	Farmside Place, Levenshulme and 114 Stockport Road, Ardwick	??		<i>Motor and Cycle Trade Directory</i> 1906
Lowcock Commercial Motor Co.	One source – manufacturing in 1910	Manchester	??	Commercial vehicles	<i>Manchester Courier</i> 18/2/1910 - report on Manchester motor show
James Robertson and Son	1900s	Dock Road, Fleetwood		Heavy commercial vehicles	Clark (1962) pp.57-58

Robertson (possibly the same as above)	1914-1916	Sale	??	Cyclecars	Georgano (2000)
Major, F.	1906 at least	310 Hyde Road, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Manchester Motor Car Corporation	1900-1903	1 Victoria Bridge St. S	??	Motorcars	<i>Slater's Manchester and Salford Trade directory</i> 1903; <i>Manchester Guardian</i> advert 14/6/1902 and <i>Manchester Guardian</i> 29/12/1900
Massey Brothers	1906 at least	132 Burton Road, West Didsbury, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Meadows, J. H.	1906 at least	Preston Street, Hulme, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Metropolitan Vickers	1933-1935	Manchester	Electrical engineer	Electric commercial vehicles	Museum of Science and Industry, Archive – Metropolitan Vickers collection
Moxon, D.	1906 at least	167, Lower Broughton Road, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Nawell Fred D.	At least c.1899-c.1906	219 and 240 Stretford Road, Hulme	Cycle Factor and Importer, manufacturer, previously iron monger (1882)	Motorcycles	<i>Manchester Cycle and Motor Show Catalogue</i> (1899) p.32; <i>Motor and Cycle Trade Directory</i> 1906
National Motor Company	1905-1906?	23 Bury new Road	??	Motorcars	<i>Motor and Cycle Trade Directory</i> 1906

Newton-Bennett	Manufacturing 1907-1916, continued as agents	Showrooms -King Street, Manchester. Works - William St. Salford	Bicycle sale and manufacture	Motorcars	Numerous sources including: Norris and Lomax (1949) pp.25-26; George (1989); a large range of primary sources
Newton-Ceirano	1924-1929?	Same as above	Bicycle sale and manufacture, and previous motor manufacturers	Motorcars	Museum of Science and Inudstry archives - A.D. George collection A1991.333\2\8 Letter to George from A. Lomas in Jan 1983
Newton Pierce and Co.	1902-1905?	Hulme (Britannia works?)	Engineering	Motorcars	Norris and Lomax (1949) ; George (1989); Museum of Science and Inudstry archives - A.D. George collection - An ABC of Manchester Motor Cars 1991.444/3/2/10; <i>The Autocar</i> 30/8/1902
Owen and Thompson	1906 at least	8 Rochdale Road, Blackley, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Payne and Company	1906 at least	Princes Street, Moss Side, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Pennington and Baines	1898-1900	Victoria Hotel Buildings, Manchester (probably a sales office)	Inventor / Engineer / Swindler	Motorcars	Georgano (2000); Several extracts from <i>The Autocar</i>
Petrie and Simister	1906 at least	916 Stockport Road, Longsite, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Pilkington Brothers	Early	Accrington	Pneumatic Hammers	Motorcars	Museum of Science and Industry Archives - Letter written by J. Norris 1948 - 0197/9/6; Clarke (2000)

Pollock Engineering Co. or Pollock and Macnab Ltd	1900- at least 1901	Stockport Road, Ashton-Under-Lyne, or Brown Street Manchester	??	Motorcars	Museum of Science and Industry Archives - Letter written by J. Norris 1948 - 0197/9/6; Ad for staff in <i>The Autocar</i> 12/1/1901; 30/11/1901; http://www.gracesguide.co.uk/Pollock_Engineering_Co and http://www.gracesguide.co.uk/Accles-Turrell ; <i>The Motorcar Journal</i> 8/6/1901 p.281
Prince, W. M.	1906 at least	198 Stretford Road, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Protector Lamp Company	1899-1906	Monton, Salford	Protector Lamps	Motorcars and light commercial vehicles	Norris and Lomax (1949); <i>MG</i> 27/2/1905
Ratcliffe, S.	1906 at least	130 Oldham Road	??	Motorcars and motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Rolls-Royce	1904-1909	Hulme	Engineering, cranes, electricals etc.	Motorcars	Multiple sources, too numerous to list, includes a number of dedicated publications
Ruby Cycle Company	1909-1932	Ancoats, Manchester, later Moss Street, Altrincham	Bicycles	Motorcycles	Multiple sources, too numerous to list
Runbaken Electrical Products	1919	280 Deansgate Manchester	Electrical engineering	Motorcycles	https://www.gracesguide.co.uk/Runbaken_Products Last accessed 3/9/2018

Simpson and Bibby	1901-1904	Pomona Engine Works, Lund St. Cornbrook	Previously Simpson and Bodman; Bibby an engineering background	Heavy commercial vehicles	Slaters Trade Directory 1903; <i>The Autocar</i> 16/3/1901; http://www.gracesguide.co.uk/Simpson_and_Bibby ; <i>The Engineer</i> 8/6/1901; <i>Commercial Motor</i> 10/1/1907
Simpson and Bodman	1896-1901	Didsbury, then Pomona Engine Works, Lund St. Cornbrook	Coachbuilder and Engineer	Heavy commercial vehicles	<i>The Autocar</i> 2/6/1900; 25/8/1900; ad 6/10/1900; <i>The Engineer</i> 18/6/1897
Short Brothers	1919-1924	Barlow Moor Road, Chorlton-c-Hardy	??	Motorcars	MOSI file on car manufacture in Manchester -ADG notes on Ashby light car - source Baldwin, N., <i>The Automobile A-Z of Cars of the 1920s</i> (1994) p.27-28
Smith, H.	1906 at least	1 Burton Road, Withington	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Swallow Cycle Company	1906 at least	349 Eccles New Road, Manchester	Bicycles	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Tallent and Co	1897	Manchester	??		<i>The Automotor and Horseless Vehicle Journal</i> July 1897 p.419
J. S. Taylor and Company	1906 at least	9 Ridgefield Road, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Thornton Motor Co.	1897-1903	Worsley Mills, off Egerton St. Hulme	Cameras	Motorcars	Georgano (2000); See also Clark, T., 'From Cameras to Cars', in <i>Veteran Car</i> , January 1999.

Trafford Motor Manufacturing Company (formally F. W. Hatton)	1902 at least	Christ Church Square, Hulme	Coachbuilding	Motorcars	<i>The Motor Car Journal</i> 26/7/1902 p.441
Tumblety Brothers	1906 at least	West Craven Street, Salford	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
W. Turner	1900 at least	291 Streford Road, Hulme	??	Motorcars	<i>The Motor Car Journal</i> 23 Feb 1900 p.818
Turner, Atherton and Co.; previously Turner and Sons.	1905-1906?	Corner of Turner Street and Ashton Road, Denton	link to Hat industry and electrical industry	Commercial vehicles	<i>Motor and Cycle Trade Directory</i> 1906; AHVJ Dec 1896 p.107; also http://www.pittdixon.co-plus.net/denton/turner-atherton.htm Last Accessed 3/9/2016
Waters, J.	1906 at least	79a Hyde Road, Manchester	??	Motorcycles	<i>Motor and Cycle Trade Directory</i> 1906
Willys Overland Crossley	1919-1933	Heaton Chapel	American Car Company and Crossley Motors	Motorcars and commercial vehicles	Multiple Sources too numerous to list
Wilkinson and Co.	1897/1898	Wigan			<i>The Automotor and Horseless Vehicle Journal</i> December 1897 p.106
Wilkinson, F.	1902-1908 at least	Cornbrook Road, Cornbrook, Manchester	Steam engineering	motorcars	Slaters Trade Directory 1903; <i>The Autocar</i> 26/4/1902; MCLGA 10/2/1908
Woodrow	1913-1915	Stockport	Hatters???	Cyclecars	Georgano (2000)

Other North-West manufacturers					
Atkinson and Co,	1916	Frenchwood Works, Preston		Commercial vehicles	Clark (1962) pp.5-8
James Buchanan and Son	1906 at least	Caedonian Foundry, Liverpool	Machine Tool Makers	Commercial vehicles	Clark (1962) p.152
Cooper & Co.	1898?-1900?	109 Bradshaw gate and 6 Great Moor Street, Bolton	Cycle makers		Cooper (2009) <i>History of the Bolton motor trade</i> p.4; <i>The Motor Car Journal</i> 23/2/1900 p.818
T. Coulthard and Co.	1895-1907	Cooper Road, Preston	??	Commercial vehicles	Numerous sources, including entry in Clark (1962) p.23
Chase Motor Truck Co.	1910 at least	Liverpool	??	Commercial vehicles	<i>Manchester Courier</i> 18/2/1910
J & G Dykes	1906-1909?	24 Tenterden Street Bury,	??		Registration records at Bury Archives and Local Studies - GB126.ABU/2/2/2/2
Eclipse Machine Co	1899-1914	Viscount street Oldham; Possible premise 23 Bury New Road	Variety of products including bikes, sewing machines and ticket punches	Motorcars	Numerous Sources including Georgano (2000); <i>The Autocar</i> 1/12/1900; <i>The Autocar</i> 24/11/1900; Manchester Central Library Archives - <i>Manchester Cycle and Motor Show Catalogue</i> 1899 p.40;
Gastall, A.	1900-1903	Blackburn			Museum of Science and Industry Archives - Letter written by J. Norris 1948

Hay Motor Co.	1905-1907 at least	South John Street, Liverpool	??	Commercial vehicles	Clark (1962) p. 34
Hitchlow Gear and Automobile Co.	1904(?) - at least 1907	Accrington	Gearboxes	Motorcars	Museum of Science and Industry Archives - Letter written by J. Norris 1948 - 0197/9/6; <i>Manchester Guardian</i> 9 Feb 1907; <i>Manchester Courier</i> 16/11/1906
Liver Motor Car - William Lea	1901-1902	Birkenhead Park, Birkenhead ; Also Berry St. Liverpool (garages)	??	Motorcars	<i>The Autocar</i> 1/6/1901 article; 16/3/1901 note; also several adverts in <i>The Autocar</i> and surviving model at the Museum of Liverpool – MMM.1998.25
Liverpool and Manchester Manufacturing Company	1902 at least	Lytton Street and 45 Everton Road, Liverpool	Also agents	Motorcar	<i>The Autocar</i> 14/2/1902
Merral-Brown (Premier Motor Works)	1919-1921	St. Georges Road Bolton	Car Dealers	Motorcars	Georgano (2000); Also see M. Worthington-Williams 'Four into Three, <i>The Automobile</i> , October 1997; Dennis, <i>Bolton Motor Industry</i> , p.25 and p.30
Moveo Cars Ltd.	1932-1933	India Mills, Preston	??	Motorcars	Ball, K., <i>Motor Car Index 1928-1939</i>
Musker	1899 -1905	Bootle, Liverpool	electrical and hydraulic Engineers (dock equipment)	Commercial vehicles	Several <i>Autocar</i> articles; Clark (1962) p.52
North Western Motors	1928-1929	35 Norton Street Liverpool	??		Ball, K., <i>Motor Car Index 1928-1939</i>
Petromobile Co.	1901-1902	Colne, Lancs; Clitheroe; office in manchester 24 York Street	??	Motorcars	<i>The Autocar</i> article 27/4/1901 and 18/5/1901

John Rae	At least 1910-1911	Mirfield Motor Works, Huddersfield	Belhaven, previous steam waggon manufacturers	Heavy Commercial vehicles	Clark (1962)p.55
Rice and Wise	1905(?)	Blackburn	??	Motorcars	Museum of Science and Industry Archives - Letter written by J. Norris 1948 - 0197/9/6
Robinson and Price Ltd.	1901-1906 at least	38 Chatham Street and 39 Whitechapel , Liverpool	Bicycle makers	Motorcycles	<i>Autocar</i> 8/2/1902; <i>Manchester Guardian</i> 5/12/1896; <i>Motor Car Journal</i> 19/10/1901 p.606
Rothwell Machine Co.	1899-1900	Market Street Bolton	Cycle makers and cycle parts	Motorcars and motorcycles	Catalogue for the 1899 Manchester cycle and Motor Show ; <i>Motor Car Journal</i> 23/2/1900 p.818
Southport Motor Agency	1903 at least	7 Mornington Road Southport, Showroom 6 Hawside Street Southport	??	Motorcars	<i>Autocar</i> advert 7/2/1903
Souvestre	1899-1900			Motorcars	Several <i>Autocar</i> Articles; <i>Motor Car Journal</i> 21/7/1900 p.350
Wade Engineering Co.	1910 at least	Liverpool, Forrest Street	??		<i>Manchester Courier</i> 18/2/1910 - report on Manchester motor show
Walker Brothers (Pagefield)	1907-1951	Wigan	??	Heavy Commercial vehicles	Multiple sources, too numerous to list.
Walmsley J., and Co.	1902 at least	Preston	Carriage Builders	Motorcars	<i>The Autocar</i> Advert 4/1/1902

Watson and Company	1901 at least	Falkner Street, Liverpool	??	Motorcycles	<i>The Motorcar Journal</i> 2/3/1901
Westwood Engineering	1919-1925(1927?)	Britannia Works, Lower Ince, Wigan	??	Motorcars	Georgano (2000); M. Worthington-Williams (1998)
Winson	1920	Rochdale	??		Georgano (2000)
Vulcan	1902-1928	Bolton then Southport Hawes Sstreet	Wood and Metal engineers	Motorcars and light commercial vehicles	Multiple sources, too numerous to list.
Lancashire Steam Motor Company (forerunner of Leyland Motors)	1896	Preston	Lawnmowers	Heavy commercial vehicles and motorcars	Multiple sources, too numerous to list.

Appendix 2 – The Graphic advert data

The below table shows the analysis of Crossley Motors' adverts in *The Graphic* from 1920-1929.

	Country	Just car	Urban	Society	generic driving	Misc	No illustration	Total
1920	6	0	1	1	1	2	0	11
1921	6	4	0	0	0	1	1	12
1922	5	3	0	0	0	0	0	8
1923	4	2	0	0	0	0	0	6
1924	4	2	0	0	0	1	0	7
1925	1	1	1	0	1	0	0	4
1926	0	1	0	0	1	0	0	2
1927	1	1	0	0	0	0	0	2
1928	2	2	0	1	0	0	0	5
1929	0	0	0	0	0	0	0	0
Total	29	16	2	2	3	4	1	57

Appendix 3a – Relevant material published prior to submission of thesis

Butt, J., “Cycling and the Origins of the Manchester Motor Industry” in *Hive: the postgraduate journal of the Faculty of Arts and Humanities at Manchester Metropolitan University*, Vol.1 (2017)

Automobile scholarship has long established the importance of the cycle industry in the origins of motor manufacturing in the UK. This has been clearly demonstrated in the cycle industry’s heartland of Coventry and the Midlands, where by 1913 75% of Coventry’s motor vehicle output came from firms that had a cycle background.¹ Scholars emphasise the obvious technical link, reasoning that all the Coventry cycle firms that expanded into automobile production were successful.² Scholars have also stressed the economic link as many cycle firms entered the motor industry for reasons of alternative income following the end of the cycle boom in the late 19th century.³ More recent scholarship has emphasised the cultural link between cycling and motoring. The established ‘bicycle craze’ created a ready culture that embraced the experience of speed, tinkering and touring that formed the basis of automobile culture.⁴

This article will add to this historiography by connecting these two approaches, considering the impact of the developing bicycle and automobile culture on the early development of the motor industry. This article will argue that cycle culture created a ready consumer group for early automobiles, which local cycle manufacturers and agents very quickly identified. This article will also demonstrate the importance of local influences on the early development of both motoring and motor manufacture, including the actions of local cycle clubs, local trade organisations, social networks and small cycle producers. These small localised clubs and the firms that served them have

¹ D. Thoms and T. Donnelly, *The Motor Car Industry in Coventry Since the 1890’s* (London & Sydney: Croom Helm, 1985) p.14

² Thoms and Donnelly (1985) p.24; S. B. Saul, ‘The Motor Industry in Britain to 1914’, *Business History*, 6 (1962) p.26; J. Foreman-Peck, S. Bowden and A. McKinlay, *The British Motor Industry*, (Manchester: Manchester University Press, 1995) p.9 (argues that the bicycle industry was an incubator for motor vehicles)

³ Thoms and Donnelly (1985) p.26; A. Milward, *Factors Contributing to the Sustained Success of the UK Cycle Industry 1870-1939* (Birmingham University: PhD Thesis, 1999) p.124

⁴ G. Mom, *Atlantic Automobility Emergence and Persistence of the Car, 1895-1940*, (New York: Berghahn, 2015) p.63; C. Reid, *Roads Were Not Built For Cars*, (Washington: Island Press, 2015)

not previously been explored in scholarship which instead focuses on large manufacturers and national clubs.

An exploration of a local area such as Manchester and its suburbs offers a case study to test these arguments. Manchester's cycle industry shows a small, but growing, locally significant industry which served the needs of local cyclists in what became a popular local pastime. This paper will begin with an overview of Manchester's cycle industry before examining the links between cycling and motoring in Manchester.

Manchester's Cycle Industry

Apart from work by Nick Clayton, scholarship on the cycle industry tends to focus on the Midlands, the industry's centre. Clayton's article on the Manchester cycle industry from 1870-1900 provides a history of some of the important Manchester cycle firms and offers an overview of cycling interest in Manchester. However, the emphasis on large manufacturers in previous research led Clayton to conclude: "lacking major cycle makers at the end of the century, the region consequently spawned relatively few local motorcar companies."⁵ While Manchester certainly lacked major cycle makers, it actually spawned dozens of automobile manufacturers, which had a prior or parallel relationship with the local cycle trade.

McLeay showed that in 1891 88% of cycle firms were situated in Wolverhampton, Birmingham and Coventry.⁶ Millward examined data from national trade directories and compiled a database for the number of firms engaged in the cycle industry from every year until 1939. This data is useful for comparative research on a local level. For example in 1900, there were 3,329 companies listed as manufacturers and agents nationally.⁷ The Manchester and Salford trade directory shows 191 firms in Manchester for the same year, 5% of the national figure, a small but significant percentage. Sources for Manchester's cycle industry include trade directories, trade periodicals, show catalogues, advertising material and local newspaper reports. Trade

⁵⁵ N. Clayton, 'A Missed Opportunity? Bicycle Manufacture ring in Manchester 1880-1900' in D. Brumhead and T. Wyke (eds.), *Moving Manchester*, (Manchester: Lancashire and Cheshire Antiquarian Society, 2004) p.193

⁶ P. McLeay, 'The Wolverhampton Motor Car Industry 1896-1937', *West Midlands Studies* 8, Winter (1974) p. 100

⁷ Millward (1999) p.163-4

directories provide the names, locations and numbers of companies every year which allows for a certain amount of statistical analysis. While the number of firms is a useful indicator of the size of an industry, there are no volume statistics available; therefore, firms producing radically different volumes carry the same weight. This is particularly important when comparing Manchester's cycle industry to the Midlands. The Manchester Cycle Manufacturing Company, Manchester's biggest bicycle manufacturers, had a capital of £50,000, significantly less than many Midland producers.⁸ Also the Manchester and Salford trade directories do not give adequate coverage to surrounding areas such as Oldham, Altrincham or Stockport, although significant producers such as Bradbury, in Oldham, had a salesroom in the city centre.⁹

Trade directory research shows that the cycle trade in Manchester developed on similar lines to the national industry. While it was small, it was healthy, and had a regional identity. Figure 1 shows the number of firms started to increase rapidly from 1896 to 1900 reflecting the cycle boom of the 1890s. Numbers also appear to be relatively unaffected by the end of the cycling boom at the turn of the century. This is perhaps a reflection of the small size of the Manchester firms. Larger firms struggled due to increasing competition in the export market.¹⁰ This saw the demise of Manchester's biggest firm the Manchester Cycle Manufacturing Company, who relied on their overseas market. It is no coincidence that several surviving models are located abroad in the USA and France.¹¹

Trade directories also show the areas in which the cycle industry was operating in Manchester. Although the majority of businesses were in the city centre, there were significant pockets of firms in Hulme and Salford, and to a lesser extent Ardwick, Chorlton-on-Medlock and Moss Side (Figure 2). The number of firms in 'other' locations shows the large dispersal around Manchester, reflecting the wide number of suburban cycle clubs and cyclists, as discussed later. The component and accessory

⁸ *Manchester Guardian* 22/7/1897 p.11

⁹ *Slater's Manchester and Salford Trade Directory* (1903) p.

¹⁰ Thoms and Donnelly (1985) p.29

¹¹ Anonymous, 'Irwell – Manchester Cycle Manufacturing Company Limited' *Elm City Commuter*, <https://elmcitycommuter.wordpress.com/2010/03/19/irwell-%E2%80%93-manchester-cycle-manufacturing-company-limited/> (date accessed 26/01/2017)

industry was much smaller but numbers increased at the same time as the number of cycle agents and manufacturers (Figure 3).

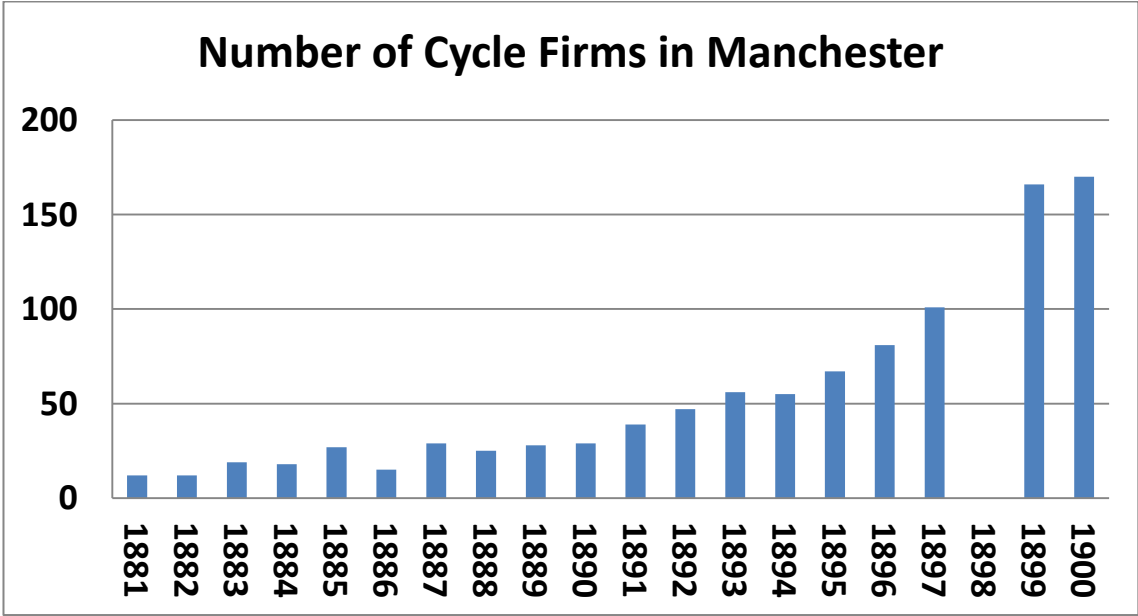


Figure 4 - Sources: Slater's Manchester and Salford Trade Directories 1881-1900 (trade directory for 1898 missing)

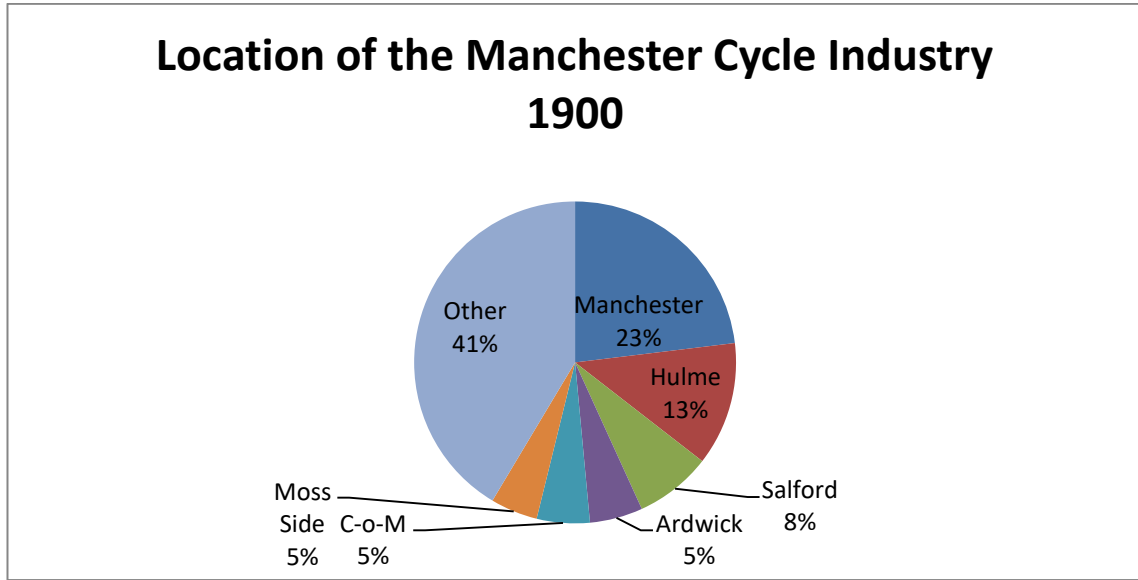


Figure 5 - Slater's Manchester and Salford Trade Directory 1900

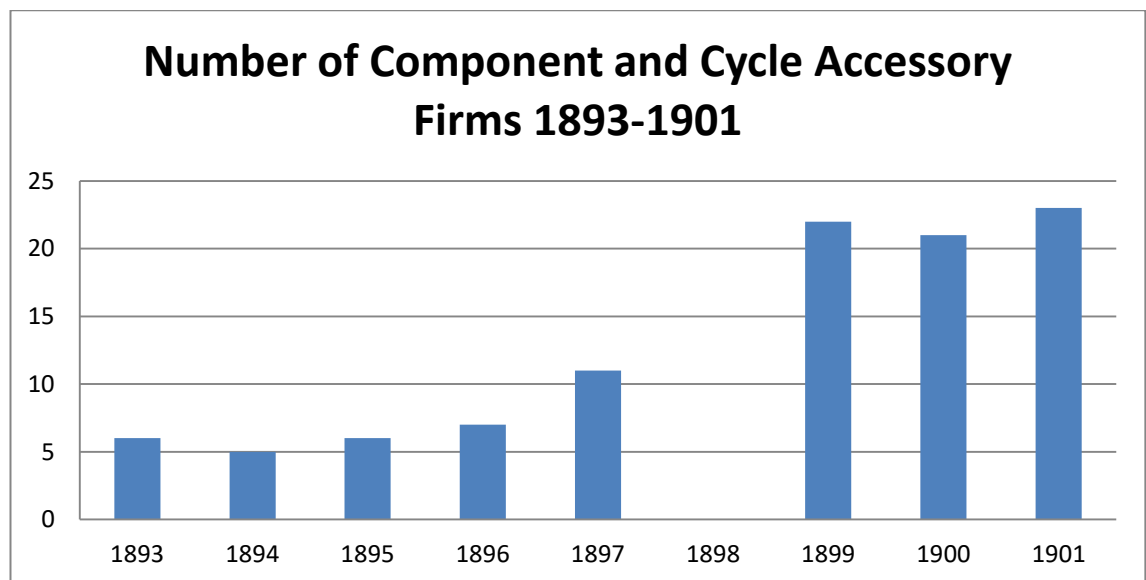


Figure 6 -Sources: Slater's Manchester and Salford Trade Directories 1883-1900 (trade directory for 1898 missing).

The Manchester cycle industry was small, but significant enough that in 1896 the Manchester and District Cycle Trades' Association (MDCTA) was established to protect local interests. The Association organised the Manchester Cycle Show from 1897, which became the Manchester Cycle and Motor Show (MCMS) in 1899. The show was increasingly popular and a catalogue for the 1899 show proudly states that it was: "over applied for before a single advertisement appeared in any journal".¹² Further demonstrating the health of the industry was a report in the *Manchester Guardian* during the 1898 show:

"One thing the exhibition makes very clear is the extent to which the manufacture of cycles is becoming a Lancashire industry. A large number of Manchester firms are represented, and machines have been sent in from almost every town in the district – in particular from Oldham, Bolton, Bury, Rochdale and Blackburn. The quality of the Lancashire work is extremely good."¹³

Despite the northern bias, analysis of the exhibitors at the 1899 show demonstrates the strength of local manufacturing, 50 of the 67 stands for cycles taken by Lancashire manufacturers.

¹² *Manchester Cycle and Motor Show Catalogue 1899* p.6: BR629.2Cy1 at Manchester Central Library

¹³ *Manchester Guardian* 19/2/1898

Manchester's Cycling and Motoring Links

Early links are in evidence when we examine the MCMS and the organisation of the MDCTA. Of the 8 companies that had motorised vehicles on show at the MCMS of 1899 (2 motorcars, 6 motorcycles), 7 were also exhibiting a variety of cycles.¹⁴ Frank Bullock, one such exhibitor, was the owner of the Strangeways Cycle Company, also a committee member of the MDCTA. He showed a very early interest in entering the motor industry, advertising several times in *The Autocar* during 1896 and 1897, including:

"All kinds of light autocar and motor work undertaken – F. Bullock, Strangeways Cycle Works"¹⁵

"Advertiser with workshops situated in Manchester is open to undertake experimental autocar and motor work, or would manufacturer any specialty under contract"¹⁶

Several other individuals involved in 1899 show were also prominent in both the cycle and motor industries. For example, John Newton, committee member of the MDCTA, was an agent for Enfield Cycles, before partnering and becoming motor car agents and then manufacturers. There was also Fredrick Nawell of Hulme who went from ironmonger, to cycle maker and dealer, to motor manufacturer and back again finally to ironmonger. Ralph Jackson, cycle maker from Altrincham, went from making bicycles to manufacturing the Century tandem, which took part in the famous 1900 1,000 mile trial.

There were also firms far less committed to either industries. Baxendale and Co. exhibited both "Beanco" cycles and motorcycles at the 1899 show, which must have been a brief venture from a company whose "Beanco" trademark covered products from toilet seats to golf balls. The number of firms at the 1899 show exhibiting both motorised and non-motorised cycles was relatively small, under 10% of exhibitors. Despite this by 1906 about 30 small firms in Manchester were making both bicycles and motorcycles, most of which would have been based on the same basic cycle

¹⁴ *Manchester Cycle and Motor Show catalogue 1899*

¹⁵ *The Autocar* 21/11/1896; *The Autocar* 30/10/1897

¹⁶ *The Autocar* 30/10/1897

frame, with both bicycle and motorcycle having the same name.¹⁷ There are several examples of this in the 1906 trade directory, see Figures 4 and 5. The clear technical crossover between cycle and motor manufacturing in these earlier years made it easy for the small Manchester firms to experiment. The customers of these firms probably fuelled this experimentation; local cyclists who wanted to try this new form of mobility. These potential customers were exposed to motoring through the showing of machines at local events such as the MCMS.



Figure 7 – Source: 1906 Motor and Cycle Trade Directory p.144

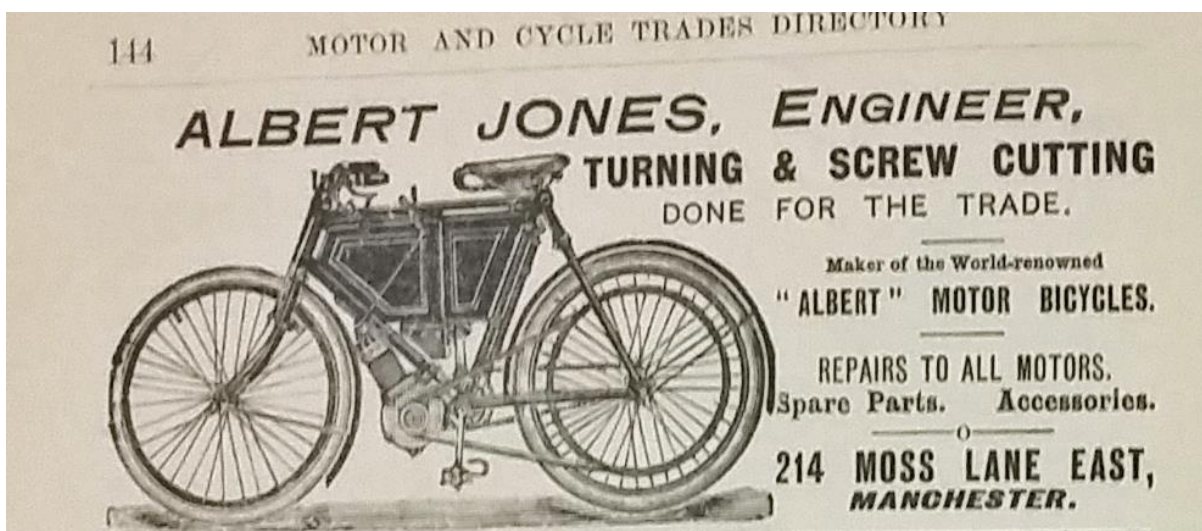


Figure 8 - Source: 1906 Motor and Cycle Trade Directory p.144

Cycling culture has made a big mark on Manchester in the surviving cycling clubs, active velodrome and notable sports personalities like Chris Boardman (Manchester

¹⁷ *Motor and Cycle Trade Directory, 1906* – Entries under "Manchester" pp.139-149

Wheeler), Adam Yates (Bury Clarion) and Jason Kenny. In the late Victorian period cycling was probably even more popular than it is today. One of the most popular forms was weekend touring with friends or family. Suddenly it became possible to leave the city's suburbs and go many miles and back in an afternoon. This weekend exodus was observed by the *Manchester Guardian* 'Cycle Notes' journalist in May 1896. In one hour around 1500 riders left Manchester on Chester and Wilmslow Road, most in social groups or attached to clubs.¹⁸ By 1899 Manchester had 49 cycling clubs, representing Manchester and its suburbs, the 3rd highest number nationally after London and Birmingham.¹⁹ It is worth noting that cycling during this period was an upper and middle-class activity, largely dominated by men. It wasn't until the inter-war period that cycling became associated as a working-class activity.²⁰ It is this market that was also particularly susceptible to the arrival of the automobile, although not all could afford it. We shall see in the evidence below how these thousands of cycling enthusiasts interacted with the arrival of the automobile. By exploring the early motoring and cycling culture we can begin to understand why local manufacturers might adapt to the motor industry.

From 1896 cyclists were gradually exposed to automobiles through friends and clubs. The Manchester Wheelers tested out a very early motorcycle in 1896.²¹ In 1899 a prominent member of the Anfield Bicycle Club who turned up with a motor tricycle "was an object of much envy."²² This 'motor envy' was often created by the novelty value of early automobiles, but it also manifested itself in the relative protection from the elements that a high driving position provided in slushy winter conditions: "Motor cars were to be seen, and drivers were envied by many a cyclist as he laboured through the mud,"²³ and "had the weather been better I should have envied the two men on a motor quadricycle whom I met on the Holmes Chapel road on Tuesday. Indeed as it was, I am a little sorry that I was not one of them."²⁴

¹⁸ *The Manchester Guardian* 11/5/1896

¹⁹ Clayton (2004) p.183

²⁰ Reid (2015) p.134

²¹ *The Automotor and Horseless Carriage Journal*, November 1896 p.75

²² *Manchester Guardian* 10/3/1899

²³ *Manchester Guardian* 22/1/1900

²⁴ *Manchester Guardian* 27/11/1899

Both cycling and motoring was a weekend, touring activity and thus cyclists were very susceptible to exposure to automobiles through both friends, clubs and random encounters on country roads. The great source for this exposure is the 'Cycling Notes' weekly column in the *Manchester Guardian* began in 1893 and continued until 1904. This column kept cyclists up to date with race results, cycle gossip and shared touring routes around the nearby countryside. The 'Cycling Notes' columns regular nature allows us to track the journalist's gradual exposure. From conversations with friends who have bought a machine, to taking a ride as a passenger. In a column in November 1898 the author notes:

"at first a cyclist who mounts a motor cycle is fascinated and enthusiastic... the pastime soon palls. A friend of mine who was motor-bitten now tells me he has learnt all there is to on his machine, and is bored by having no work to do."²⁵

The author use of the phrase "motor-bitten" to describe his friend, and is himself "bitten" a year later when he acknowledges the pastime is not such a fad:

"my most regular riding chum has lately gone in for motoring, I have so far had only one ride – about forty miles – on a motor car; and then I was simply a passenger, not a driver. But the sport was so exciting that I have a positive longing for more."²⁶

The experience of this cyclist is evidence of how cycling merged with motoring, through indirect and then direct exposure as more and more club mates and "riding chums" had a go on a motorcycle or motorcar. This exposure manifested itself officially in the creation of motoring sections of cycling clubs, such as the Manchester Wheelers' Motoring Section which began in 1899 and held joint runs for several years afterwards, such as a run to Over Peover in 1904 attended by 37 bicycles, 3 motor cars and two motor bicycles.²⁷

It was not just through touring that motor vehicles were introduced to cyclists, but at racing events too. In Manchester the most popular venue was the Fallowfield Track. Cycle racing was incredibly popular with large crowds recorded over several years during the period, and slowly motoring was introduced. One such example was a

²⁵ *Manchester Guardian* 21/11/1898

²⁶ *Manchester Guardian* 27/11/1899

²⁷ *Manchester Guardian* 23/3/1903

Manchester Wheelers race meeting at the Fallowfield Track which included a combination of cycle and motorcycle races with a large crowd of 12,000 people.²⁸ The popularity of cycling as a spectator sport also provided the foundations for the popularity of motor racing in the North West at places such as Blackpool and Southport.

Conclusion

This article has demonstrated the need to look beyond national businesses and organisations when exploring a technology's emergence. The ready acceptance and enthusiasm of local individuals and firms to experiment with motor vehicle manufacture demonstrates the intrinsic link between the Manchester cycle industry and local cycling community and the development of the early motor industry; confirming the important influence of not just technology and finance in the cycle industry, but of the 'bicycle craze' on early motor manufacture. Evidence of this can be seen in the MDCTA which later became the Manchester District Motor Trades Association, providing a centre for both cycle and motor traders in the city. More importantly perhaps for the establishment of the motor industry in Manchester was the city's cycling culture and its similarities with the fledgling automobile culture, both in its instruments: clubs, journals, and newspaper columns, and its appeal to individuals through touring and racing. This strong link, on a local level, where Mom professes a transnational level, perhaps more than anything can lead us to understand why a large number of Manchester cycle producers both persisted in the cycle trade and diversified into the motor trade so early during the Victorian era.²⁹

²⁸ *Manchester Guardian* 16/7/1900

²⁹ Mom (2015) pp.61-64

Appendix 3b – Relevant material published prior to submission of thesis

Butt, J., “Adapting to the emergence of the automobile: a case study of Manchester coachbuilder Joseph Cockshoot and Co. 1896-1939” in *Science Museum Group Journal*, Vol.8 (2017)

Article DOI: <http://dx.doi.org/10.15180/170803>

Abstract

Today motor vehicles are ubiquitous. Yet at the end of the 19th century motoring was a new pastime, and there were only a few hundred motorised vehicles on the road. Many believed motoring to be a fad and motorists faced opposition on many fronts, from local corporations, the police and rural residents. Coachbuilders also had an uneasy relationship with this new technology. Automobile manufacturers and customers required coachbuilder’s skills to build motor car bodies. Yet the growth of the automobile began to affect the use of horse-drawn transport during the first decade of the 20th century. This paper will analyse the relationship between the horse-drawn and the motorised vehicle in the UK during this transitional period before exploring the records of Manchester coachbuilder Joseph Cockshoot and Co. that survive at the Museum of Science and Industry Archive. This collection offers a rare insight into the dilemmas faced by coachbuilders in this era of transition. This paper argues that the emergence of the automobile was not a simple matter of technological progress, but involved complex relationships between manufacturers, coachbuilders and customers.

Acknowledgements

I am very grateful to my PhD supervisors Dr Craig Horner (Manchester Metropolitan University) and Jan Shearsmith (Museum of Science and Industry) who have supported this work in numerous ways. I would also like to thank Roy Brooks, whose previous work on the Cockshoot collection has been invaluable to the writing of this article.

Key words

automobile, coachbuilding, carriage, Cockshoot, Manchester, motoring

Author information

I am a PhD student researching the Manchester motor industry in collaboration with the Museum of Science and Industry. I am trying to understand why Manchester became one of the principal regions of motor manufacture in Edwardian Britain; and why the local industry had almost disappeared by the 1930s.

I completed an MA in Art Gallery and Museum Studies in 2012 before working as Assistant Curator at the People's History Museum in Manchester. I am particularly interested in how objects have survived, been collected and rationalised by cultural institutions.

Introduction

'At the end of the century came the turning of the tide so far as traditional forms of transport went. It began as a tiny trickle but grew, as we all know, with fantastic speed.' John Norris, former Cockshoot's Director.¹

'The transition from carriages to automobiles was a messy, indistinct overlap of several decades, but to so many who lived through it, it seemed to happen so quickly. Then again, was this not in keeping with the automobile's very nature?' (Kinney, 2004, p.298)²

The first quote above describes the arrival of the automobile as an inexorable event. Slowly, and then more rapidly, sweeping away the horse-drawn vehicle into extinction. Traditional automobile scholars have also viewed the coming of the car as the inevitable replacement of the horse, debating only the speed of its rise to dominance (for example, Foreman-Peck, Bowden and McKinlay, 1995 and Church, 1995).³ However, more recent automobile scholarship has shifting the focus away from automobile production and technological advancement by exploring the uses and users of the automobile (for example, Mom, 2015; Reid, 2015 and Merriman, 2012).⁴ These scholars have highlighted the importance of cultural factors in the transition to the automobile, such as the social, sensory and emotional experience. Contradicting the first quote is the second, which highlights that the transition was neither clear, nor as quick as we might imagine. The focus on the 'victor' of this transitory period, has led to a lack of exploration of the horse-drawn vehicle and its supporting trades, such as the coachbuilder or the wheelwright. More recently, scholars such as Kinney (2004) for the USA, and Tjong Tjing Tai (2015) for the Netherlands, have sought to address the imbalance by exploring how coachbuilders adapted to the arrival of the automobile.⁵ They highlight, the great disparity in the speed of coachbuilders to transition; the contradiction that coachbuilders were, on the one hand seen as natural builders on the new horseless-carriage with their woodworking skills, yet unsuited to the new demands of metalworking and mechanical engineering; and the varied impact of the automobile depending on the types of coachwork, high-class coachbuilders were effected much quicker than wagonbuilders. The aim of this study is to show how the

transition of coachbuilders in this country generally fit with these findings from abroad.

This paper examines the archives of a Manchester coachbuilder, Joseph Cockshoot and Co. housed at Manchester's Museum of Science and Industry. The firm's extensive collection offers a unique perspective on the advent of the motor car. To establish the context of the transition period this paper will start with a brief analysis of the use of horse-drawn and motorised transport in the UK from 1901 to 1921, before using the Cockshoot archives as a case study.

The transitional period in context

Georgano (2001, pp.3-41) provides an overview of the transitional period in the UK.⁶ However, Georgano's focus is on motor car body building, thus the work neglects the rest of the coachbuilding industry which included wagonbuilders, cartbuilders, wheelwrights and carriage component manufacturers. It therefore fails to provide an overall perspective on the impact of the automobile industry on coachbuilding, because its focus is on the private vehicle and not on public vehicles such as buses, taxi cabs, or commercial vehicles such as lorries. Because there is no authoritative work on the UK's carriage industry it is necessary to explore some national trends during the period of transition.

Diffusion of the motorised vehicle varied between private, public and commercial vehicles. This difference is noted by Barker and Gerhold (1993, pp.56-61), who argue that private and public motoring rapidly replaced horse-drawn vehicles, whilst commercial motor vehicles were much slower to diffuse.⁷ However, this conclusion is reached by comparing motor vehicle statistics and generally lacks a comparison with horse-drawn vehicle statistics.⁸ Mom (2015, p.65) in an analysis of transport usage in France between 1863-1921 shows a much more balanced picture, taking into account both horse-drawn and motorised transport use, which shows that whilst private horse-drawn travel was on a steady decline it still accounted for more overall passenger kilometres than both bicycles and motor vehicles, even after the First World War. The speed in which coachbuilders adapted to the rise of the automobile also depended both on the location, urban or rural, and the type of coachbuilder, high-class

carriagebuilder or wagonbuilder (Tjong Tjin Tai, 2015, p.191 and Kinney, 2004, p.298). The variety of the coachbuilding trade is important as the arrival of motorised vehicles affected different areas of the horse trade in radically different ways. For example, high quality carriagebuilders like Cockshoot's noticed that their upper-class customers were buying automobiles as early as 1902, while wagonbuilders would probably have seen little difference in trade until well after the first decade of the 20th century, and motorised commercial vehicle sales were very modest before the First World War, especially when compared to passenger vehicles (Barker and Gerhold, 1993, p.60).

Diffusion of the automobile started slowly, but rapidly increased into the 1920s. One would expect this to be mirrored by the decline in horse-drawn transport; however there were subtle but significant variations. Changes can be tracked in the analysis of occupational data from the censuses of England and Wales in 1901, 1911 and 1921. In 1901 there were only 623 people employed as either, chauffeurs, commercial drivers, or motorised cab drivers; this had increased to 43,094 by 1911.⁹ Despite this rise there was an increase in the level of horse-drawn transport employment, from 347,655 in 1901 to 374,587 by 1911.¹⁰ Motorised employment represented only about 10% of road transport employment in 1911, a relatively modest amount. If we explore these statistics further we can see some other interesting trends. While the number of chauffeurs grew to 23,151 in 1911 the number of coachmen and grooms employed only fell by 8,127, to 67,228 in 1911, suggesting that new automobile owners were not necessarily replacing their coach staff when hiring chauffeurs.¹¹ Numbers involved in horse-drawn commercial haulage had increased. This is mirrored by the coinciding increase in the number of horses being used for freight purposes (Barker and Gerhold, 1993, p.60). There was a marked decline in public horse-drawn transport, as cabmen, grooms and stablemen numbers declined by a third by 1911.¹² However this decline was also affected by improved electric tram systems in the cities (Lyddon, 1987, p.180 and Barker and Gerhold, 1993, p.54).¹³ Statistical analysis is not as detailed for 1921, but by this point the ratio of horse-drivers to motor drivers in the road transport industry was virtually 50:50. However the census report noted that this ratio varied significantly by area. For example while the South had many counties with a majority of motor employment, the North only had one.¹⁴

Business listings in local trade directories allows for an analysis of the regional motor and carriage trade in the first few decades of the 20th century. Figure 1 shows relatively little difference between 1901 and 1911, notable only for a small number of motorcar garages and agencies emerging, with only a small drop in associated horse and carriage trade businesses; however between 1911 and 1931 there is an appreciable difference, especially in the rise of motorcar garages and the decline in wheelwrights. However, the number of carriage and coachbuilders stayed roughly the same throughout the period as they often became carriage and motor body builders, showing that coachbuilders were able to adapt and survive in the motor age. Many like Cockshoot became motor body builders, agents and garage proprietors.

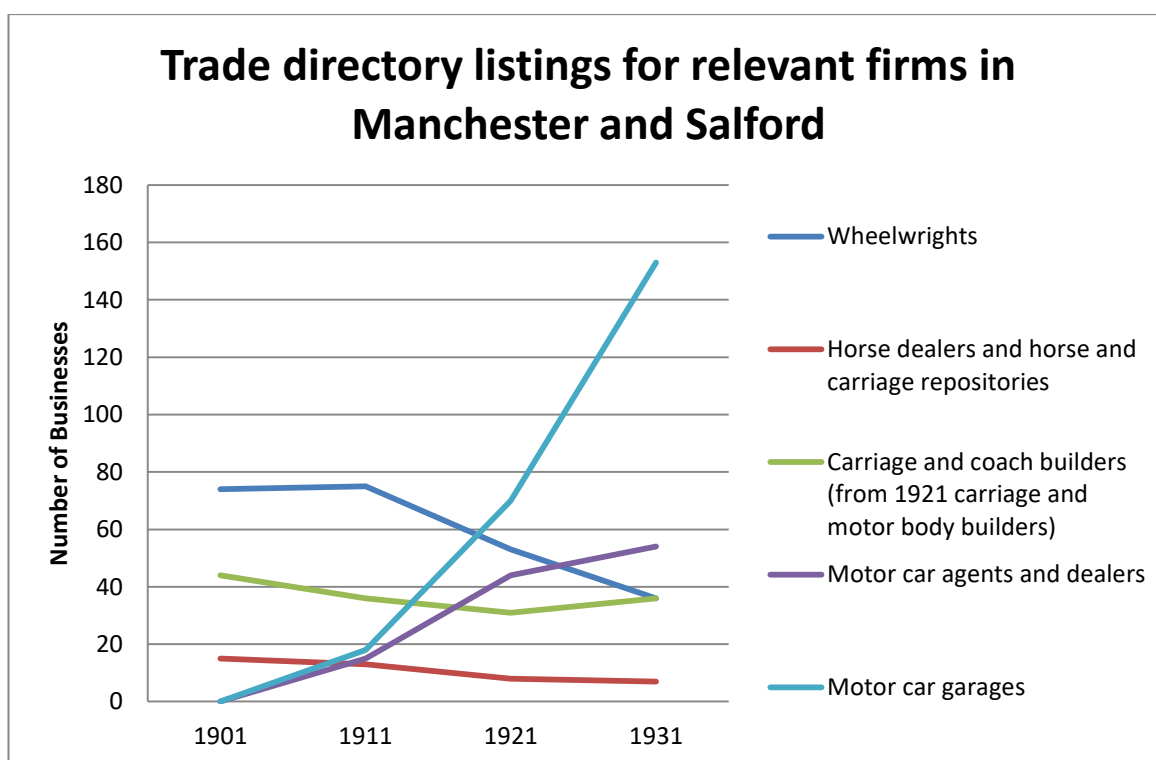


Figure 9 - Data collected from the *Slater's Manchester and Salford Trade Directory*, 1901, 1911, 1921 and 1931

This statistical analysis has been brief, but serves to demonstrate changes over three decades, from a gradual increase in motor transport before the First World War to an ever quicker increase afterwards, which eventually saw the decline of horse-drawn transport in all areas in the inter-war period. Although the increase of motorised transport employment did not see a mirrored decrease in horse-drawn. This analysis

has also demonstrated the varied speed of diffusion of private, public and commercial vehicles, which would have affected different coachbuilders in different ways.

Attitudes towards early motoring

In the late 19th century many believed motoring to be a fad and motorists faced opposition on many fronts, from local corporations, the police and rural residents and those with a vested interest in the horse trade. At the advent of the industry many coachbuilders were also sceptical. However this attitude was not necessarily due to the threat posed to the established horse trade, but more to do with the unreliability, smell and noise created by the automobile. Simpson and Bodman, an early motor manufacturer founded in Manchester, focused on commercial vehicles because they believed the passenger vehicle to be unviable:

‘when as a carriage builder one of us has pointed out the defects of noise, clumsiness, and complication that he knew would never be tolerated... We do not think there is a village wheelwright even who would risk his reputation to say that any of the French or Franco-Coventry productions possessed the running – or standing – merits of a private carriage, in the sense that English carriage owners would accept it.’¹⁵

This view was also held by coachbuilders across the world. A Dutch trade journal noted that the automobile missed the grace of horse-drawn transport, an opinion also echoed in by American coachbuilders (Tjong Tjing Tai, 2015, p.191 and Kinney, 2004, p.267). A few British coachbuilders, such as Arthur Mulliner, involved themselves in the motor trade in the 19th century; however these were exceptions (Georgano, 2001, p.246). Despite this the popularity of motoring soon defied the automobiles inherent flaws as the experience of speed, and the adventure of touring became a powerful driving force in the establishment of automobile culture (Mom, 2015, Chapter One: ‘Racing, Touring Tinkering Constructing the Adventure Machine (1895-1914/1917)’, pp.59-113).

Introducing Joseph Cockshoot and Company



Figure 10 – Drawing of the High Sherriff of Lancashire’s coach built by Cockshoot – YMS 0197/1/1/9

Joseph Cockshoot set up as an independent coachbuilder in 1844, before forming a partnership with William Norris in 1851. By the 20th century the firm had a long history of building quality carriages for Lancashire and Cheshire’s upper-classes, as well as selling second-hand carriages. Examples of the firm’s elegant and high quality work can be found in abundance in the company archives including the carriage in Figure 2 which was commissioned by the High Sherriff of Lancashire. The firm also won numerous awards such as the Premier Gold Medal at the Paris Exhibition of 1878. Cockshoot entered the motor industry between 1901 and 1902 by building a few motorcar bodies for clients, before opening a motor department in 1903. By 1907 they had auctioned off their remaining stock of horse-drawn carriages and accessories and were wholly committed to the motor trade which brought them good business for the rest of their history. The firm became a private limited company in 1895 and public

limited in 1959. For Cockshoot, as motor body custom declined they expanded motorcar sales and repairs for which they were successful well into the latter half of the 20th century. The business was bought in 1968 by Lex Garages Ltd. and by 1970, after 119 years, the Norris family ceased involvement in the management of the firm.

Cockshoot are an example of a coachbuilder successfully and rapidly adapting to the rise of the automobile and the decline of the horse-drawn vehicle, although as we have seen in the analysis above many other coachbuilders survived the period as agents and motor body builders. In the following analysis we will explore the firm's relationship with both customers and early motor manufacturers; the decision to set up the motor department; and set the firms actions in context, both regionally and nationally.

Cockshoot's entry into the motor industry

A special letter addressed to shareholders on 23 December 1902 announced the decision that J. Cockshoot and Co. was creating a Motor Department, with the purchase of new premises to support the operation. In the letter they reasoned:

'It has been evident for some time past that customers of the firm have been purchasing motorcars in addition to their carriages, and it requires no great amount of argument to show that if that be the case their carriages, used alternatively with motorcars, will last much longer than if they used carriages solely.'¹⁶

They then noted that although there was no change at the moment, there would be if the fortune of the motor industry continued to improve. Their research involved visiting coachbuilders in London, Paris and the provinces to see how they had been adapting to the new motor industry. The letter suggests that ownership of an automobile without a carriage was unlikely in the period up until 1902. Indeed the carriage and the motorcar could easily serve separate functions. Many coach-owners had several different carriages for different uses, with two and four wheelers, gigs, broughams, carrying a variety of different passengers and cargoes. Similarly there were open top carriages for summer, such as figure 3, and closed cabs for winter (Watney, 1961, p.17).¹⁷ More recent automobile scholarship has emphasised both the unreliability and the adventuring qualities of the automobile during this period, used

for touring and racing (Mom, 2015, pp.59-113). Carriages therefore might still be used to provide practical transportation, to the railway station, the church, or to visit friends. Indeed as late as 1907 Rolls-Royce proudly advertised in *The Autocar* that: 'A private owner of a R.R. writes: "I may say my car is a perfect dream. It is so reliable that I have done away with my carriages and horses."' ¹⁸ The implication being that carriage owners were not replacing entirely with motorcars.

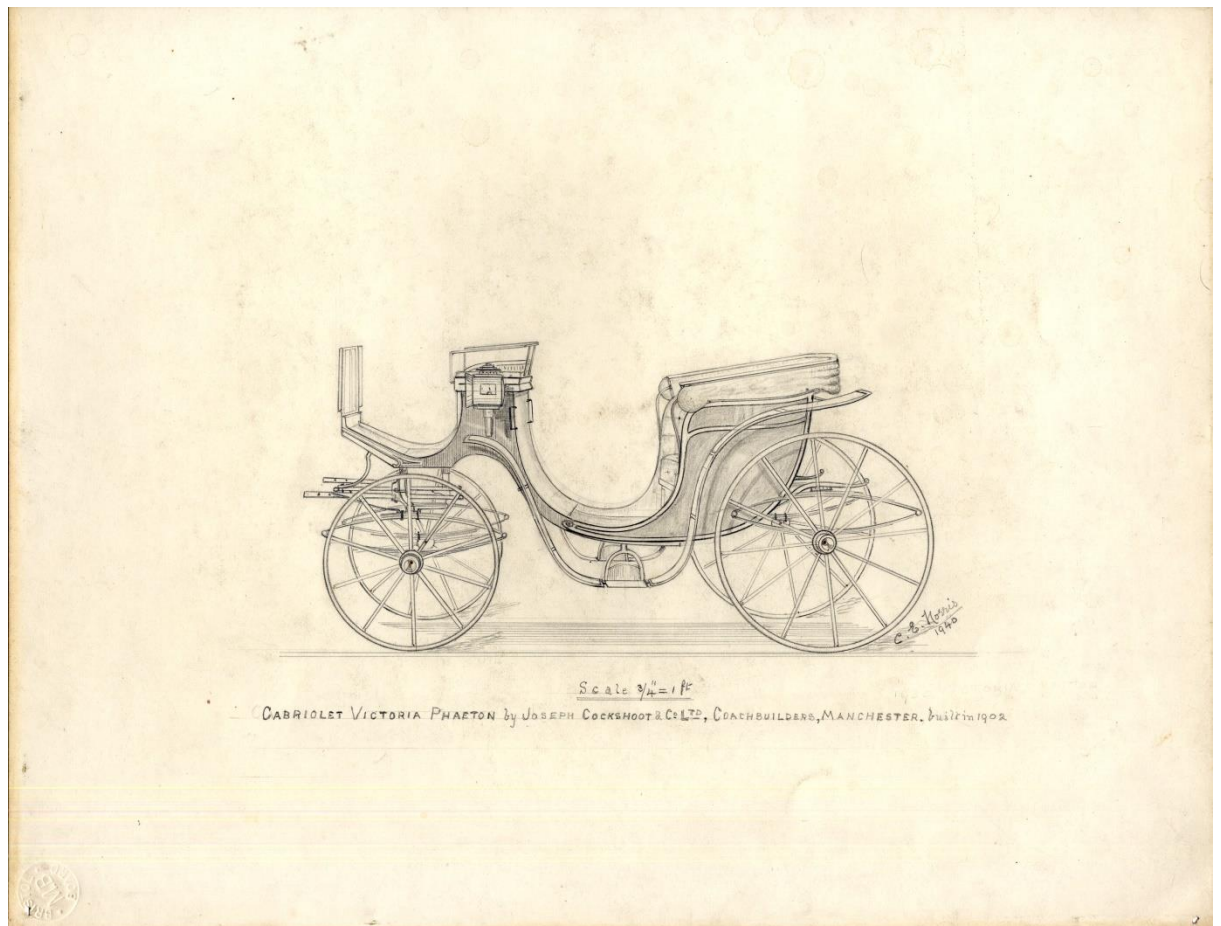


Figure 11 – Drawing of a Cabriolet Victoria Phaeton made in 1902. Carriage nomenclature was used for automobile bodies - YMS 0197/1/1/20

The decision therefore shows bold leadership from the Norris family, whose second generation were largely responsible for running the business during this period. Despite this, the decision was challenged within the company; two of the six directors, John Ainsworth and Ezra Miller, voted against entering the motoring industry.¹⁹ Ainsworth was a large shareholder, and Miller was a harness maker for the firm, representing a specific skill that was unique to horse-drawn transport. This highlights

that coachbuilding firms were a collection of many different crafts. Trimmers, coachbuilders, carpenters and painters would still have a role, whereas harness makers and wheelwrights might feel threatened by the new department.²⁰ This split is highlighted in the United Kingdom Society of Coachbuilders membership (Lyddon, 1987, p.73). Roughly 33% of the workforce might be affected negatively, which would certainly explain the opposition within Cockshoot and more widely among other coachbuilders.

The venture was one vote from not starting. The internal loggerhead is remembered in a note on the subject written in the 1950s, by former director John Norris, working for the company at the time, 'There was, in fact, a sharp difference of opinion between the Directors, which persisted for many years.'²¹ He expands on this in other memoirs: 'And again there was a tremendous amount of prejudice surrounding the motorcar and a serious maker found he not only had to break down this but also fight the vested interest.' 'I remember my brother's own tough fight with his co-directors on Cockshoot's board to persuade them to take the trade seriously.'²² Interestingly, but not perhaps unsurprisingly this decision was viewed very differently by the company in later decades. The company's catalogue for 1924 announced 'it was but a natural development that the firm should take its place with the pioneers of the motor industry in this country.'²³ This insight into the firm's dilemma is a rare opportunity to challenge the assumption that coachbuilders naturally adapted to the change brought about by the automobile. Indeed, while Cockshoot both entered early and negotiated this difficult period with relative success, one wonders what the situation was at other coachbuilders. This entry period also highlights the problem with considering coachbuilders as a single trade, when in fact there were several that made up the industry, each with quite different roles and prejudices.

Early dealings (1902-10)

Ainsworth and Miller might have been justified in their objections. Cockshoot leased a garage on Deansgate, known as 'The Arches' and negotiated the agency for the Velox, the Rex, the Northern Runabout and the Stanley Steam Car, all of which were initially unsuccessful for Cockshoot and led to a loss for the new department in 1903, which had to be offset by carriage trade profits.²⁴ The opening of the motor department in

1903, might have been viewed as visionary in hindsight, however it demonstrates how difficult and unnatural it was for a coachbuilder to open a garage and begin with motorcar agencies. Cockshoot lacked expertise among the staff already employed at the firm and relied on those in Manchester who did. Fred Settle was employed as chief mechanic. Settle had been involved in one of Manchester's first garage ventures the Manchester Motor Car Corporation and had at least three years' experience as a motorcar mechanic.²⁵ With a good reputation as a coachbuilder Cockshoot were well placed to sell motorcars to their clientele, however in the UK dealerships were almost always agreed with a territory arrangement, so picking the right car agency could be a tricky, especially with no experience. In this respect the firm bought the business and the rights to the agency agreements of Manchester dealer F. Wilkinson and Co., who had agencies for the American Stanley Steam Car and the petrol driven Northern Runabout.²⁶ Like Settle, Wilkinson also had a history in the local industry, for several years previously he sold steam engine components and steam powered automobiles.²⁷ To demonstrate the difficulty of selecting agencies we only need to examine the number of motorcar manufacturers at the time. The North-West alone had 20 automobile manufacturers, while estimates show there were around 200 automobile manufacturers in the UK, not counting all the foreign manufacturers (Beaven, 1994, p.46).²⁸ Adapting to engineering and agency sales was not straightforward, a step that is often neglected. Automobile scholars such as Georgano (2001, p.3) and Foreman-Peck, Bowden and McKinley (1995, p.7) focus instead on coachbuilders' more natural transition to motorcar body production. For example, Cockshoot had already been approached by several clients to fit motorcar bodies prior to 1903 (Brooks, 1979, 09002).²⁹

The initial poor performance did not deter the firm who soon established themselves with some more successful agencies and some regular motor body building work for local and international firms, including Renault, Rolls-Royce and Panhard. Despite the controversial and rocky entry into the motoring industry, Cockshoot ceased all involvement in the carriage trade when in October 1909 the remaining stock, including harnesses, whips etc. were put up for auction.³⁰ Although coachbuilders by tradition from then onwards, Cockshoot were solely engaged in the motor trade.

Despite Cockshoot's bold decision to enter the motor trade in late 1902, economically it was a difficult road to success. Indeed John Norris in his memoirs put a large emphasis on the firm's crucial relationship with Renault, both as agent and motorcar body builder.³¹ To demonstrate how complex and contradictory this period was for coachbuilders we only have to explore Manchester's other coachbuilders. Anne Cowburn was also a high-class, long established coachbuilder. Yet they did not enter the industry until 1909 when they announced in an advert: 'Finding that there is an inclination amongst our numerous clients to replace their Carriages with Motor Cars, we have opened and equipped... an engineering department and garage.'³² However, there were also new firms like Hollingdrake of Stockport that set up business as early as 1902 specifically to manufacture motorcar bodies (Clarke, 2002).³³ Going back to the opening quote from Kinney, it was both messy and indistinct.

Relationships with customers

As seen above, Cockshoot was motivated to enter the industry after noticing the changing trends in vehicle ownership amongst their customers. Coachbuilders with upper-class clientele were more likely to take this step early (Tai Tjong Tjing, 2015, p.191 and Kinney, 2004, pp.271-2). Examining Cockshoot customers and their early business in the motor industry has highlighted the importance of the relationship between the customer and the coachbuilder in the early motor industry. It is clear that Cockshoot's customers were upper-class. We can tell this from the types of cars they were buying, their titles and the number of motorcar bodies bought with crests. Between 1903 and 1906 motorcar bodies were commissioned by four knights, a Lord, several high ranking military officer and many prominent Manchester businessmen. 28 of the first 55 bodies photographed by the firm had crests emblazoned on the side; many of these were also pictured with chauffeurs at the wheel. The use of crests was inherited from carriage ownership and the surviving Cockshoot book of customer's heraldry shows hundreds of examples including figures 4 and 5. Further demonstration of the class of customers was the facilities to 'stable' vehicles at the firm's Deansgate garage, which included sleeping quarters and a billiard table for chauffeurs.³⁴



Figure 12 - The Crest of John Carlisle, who bought a motor car body from Cockshoot in 1905 with the latin motto that translates 'Humility' YMS 0196/5/1/9



Figure 13 - The Crest of the Ashworth family used on several carriages and cars bought from Cockshoot. The motto translates 'Love of country conquers' - YMS 0196/5/1/9

Carriages tended to last a long time and required very little maintenance especially compared to early automobiles (Georgano, 2011, p.3). The rate of progress of the automobile and its capacity to breakdown led to frequent new purchases for those who could afford it. Among Cockshoot's customers were several repeating commissions, the most frequent of which were Mr and Mrs Ashworth, who returned four times to Cockshoot for new motorcar bodies between 1903 and 1912.³⁵ The relationship between the coachbuilder and the customer was important in the making of custom motor car bodies, which could include several visits to the works, and lengthy correspondence over the specifications of design (Brooks, 1979, 08025-080059). This could span several months, as often chassis were made after receipt of an order and coachbuilders would work with each customer to build their specific body; included choosing the interior decoration, the colour, the style of the body, whether closed or open, how many seats, as well as any other number of customer demands such as luggage space, or items like additional horns, as seen in figure 6.

What is also noticeable is the number of customers that bought both carriages and motor cars from the firm. For example the Rice family used Cockshoot either to buy carriages or getting carriages re-painted in 1892, 1896 and 1897 and then commissioned motor car bodies in 1906 and 1908. Similarly G. S. Ball had work commissioned on carriages in 1889, 1890, 1893 and 1895 before purchasing motor car bodies in 1905 and 1906.³⁶ There are many more examples, but they serve to confirm that the customer base of high quality coachbuilder's gave them potential to move into motorcar body building during the Edwardian period.

Brooks' list of all the motor car bodies manufactured by Cockshoot shows that between 1908 and 1912 women made up over 10% of total motor body customers (Brooks, 1979, 08005). This was particularly high especially compared to Cheshire registration data which shows that between 1903 and 1911 only 41 out of 3658 vehicles were registered by women, a proportion of just over 1%.³⁷ While further afield in Arizona, 1915, only 5.5% of automobile registrations were by women.³⁸ The customer records at Cockshoot therefore support Scharff's suggestion that there were more women drivers and buyers than registration statistics suggest, with the habit being for vehicles to be registered in the male name.³⁹ The range of female customers

and the types of cars they were purchasing shows an interesting variety. While many women motorists were challenging gender assumptions by racing or driving large powerful cars other upper-class women positioned motoring as a suitable past-time as chauffeur driven passenger-owners (Merriman, 2012, p.99). This complexity is certainly evident in Cockshoot's female customers of the Edwardian period. For example, racing driver Miss Daisy Hampson purchased a 60 horse power Mercedes in 1904 and a powerful 120 horsepower FIAT race car that had finished second in the Gordon Bennett race of 1905.⁴⁰ At the other end of the spectrum was Miss Ella Ross Cordingly Shaw's more sedate 12 horsepower Velux, bodied by Cockshoot in 1903. While somewhere in between was Miss Parry's 20/30 horsepower Renault bought in 1905, as seen in Figure 6, with a horn for the rear passenger, presumably so Miss Parry could do some backseat driving, behind her chauffeur (Brooks, 1979, 08011).

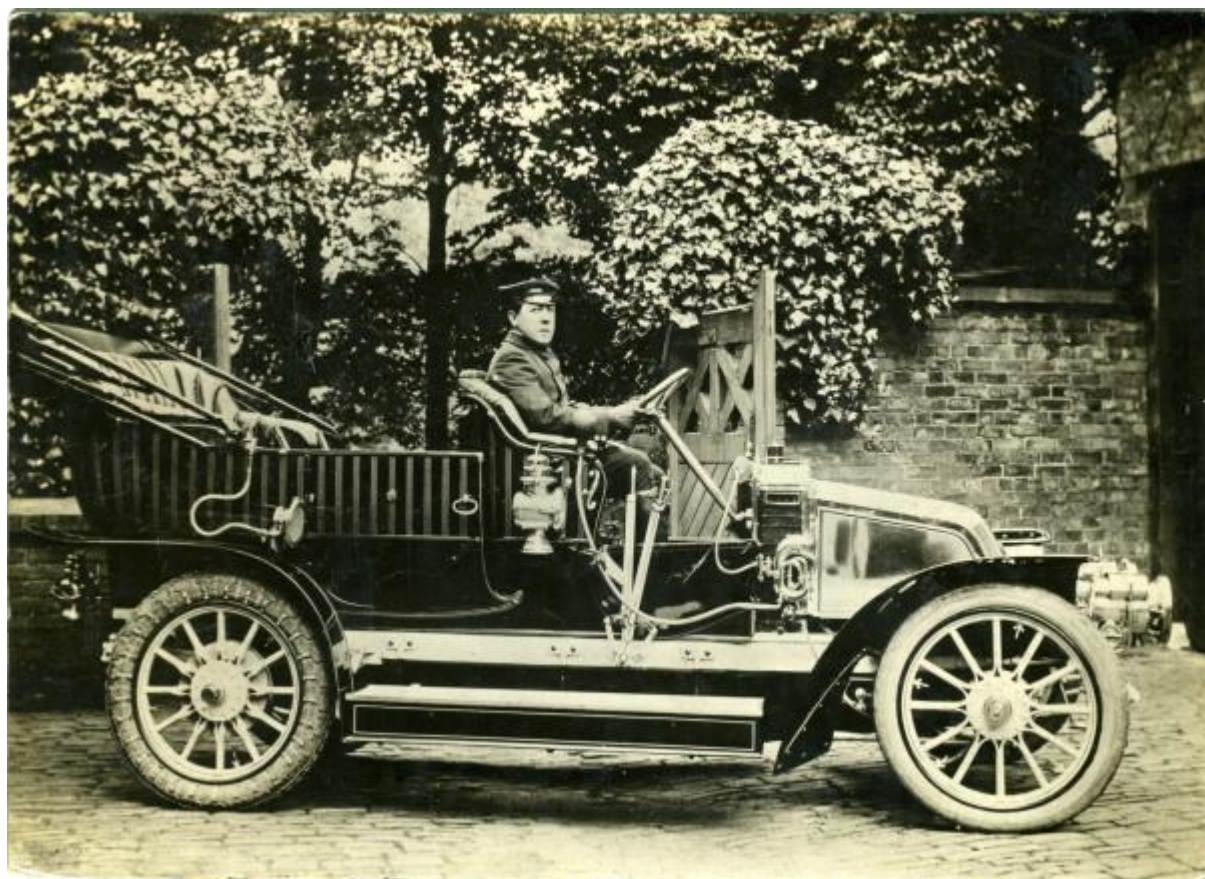


Figure 14 - Mrs Parry's 20/30 Horsepower Renault with horn attached to the back seat and chauffeur at the wheel - YMS Cockshoot Photograph Box 1, 1905

Relationship with manufacturers

The relationship between automobile manufacturer, coachbuilder and customer was complex, the coachbuilder acting as an intermediary between the manufacturer and the prospective customer. Cockshoot's large established clientele of rich and upper-class carriage owners, wanting to purchase a motorcar, would be an attractive proposition to a manufacturer looking for new customers. Cockshoot, as the provider of the car body and as the agent for the manufacturer, would have been the first point of contact when there was a problem with the vehicle. Therefore it was not just the relationship between Cockshoot and its' customers that had to be maintained, but also the relationship between the newly emerging car manufacturers and Cockshoot as the agent that had to be established and built upon in order for both the growth and future survival of the new partnerships.

This becomes clear in the case of Mr R. P Richards who was sold a Rolls-Royce chassis and custom body by Cockshoot in 1911. Full correspondence survives between Cockshoot and Mr Richards and shows the level of customer support that Cockshoot gave, dealing with problems with the coachwork, creating bespoke solutions to mechanical issues, as well as offering to acquire new parts (Brooks, 1979, 08025-08059). Mr Richards motorcar body came with 36 personal specifications including: a small folding table in the rear, a portable luggage grid at back with strappings, silk curtains with tassels, tool boxes under the steps, a generally light body, well sprung, with seats not too upright. Cockshoot also provided him with spares for his Renault, which was being taken by Cockshoot in exchange for his new Rolls-Royce. Richards thanked Cockshoot for writing to Rolls-Royce to press them for quick delivery of the chassis, for which Rolls-Royce could not guarantee delivery before Easter 1911. The car was finally ready for Mr Richard's touring holiday on July 1911, the whole process lasting around 6 months. After delivery, a rattle developed which Cockshoot promised to rectify 'we shall... either send out a man to do what is necessary, or better still to correct the fault here if you will drive it in some day.'⁴¹ Clear in the correspondence is the complexity of the work and the difficulty of dealing not only with bespoke orders but mechanical issues, after the sale.

After the short-lived agencies for American steam cars in 1903 Cockshoot struck up a good relationship with Renault that lasted several years. This relationship developed

through personal contacts, the former Motor Department Manager Mr P. Dobson left to work for Renault in London. It was this agency, and the custom body orders that came with it that helped guarantee Cockshoot's success before 1914. Brook's analysis of motorcar bodies built shows that 36 of 52 bodies built in 1906 were Renaults and 78 out of 118 in 1907 (Brooks, 1979, 05008). However this relationship ended around the time of the First World War, perhaps because Dobson left Renault to manufacture his own cars. A more lasting relationship was formed with Rolls-Royce, for whom Cockshoot would be local agents well into the middle of the century. While Rolls-Royce and Renault agencies fit with Cockshoot's upper-class clientele, after the First World War their relationship with mass car producer Morris was to be of more importance in a period that saw the rapid growth of automobile sales in the UK.

Once Cockshoot had decided to open the Motor Department in 1903 they were very quick to advertise their involvement in the automobile industry both in local newspapers and in automobile trade journals such as *The Autocar*.⁴² Apart from J. Walmsley of Preston, advertising as early as 1902, they were the first North-West coachbuilder to advertise in motoring journals.⁴³ Interestingly the firm continued to boldly associate with their carriage building history long after they had anything to do with carriages. For example Figure 7, an advert from 1909, was printed after the final sale of carriage stock.

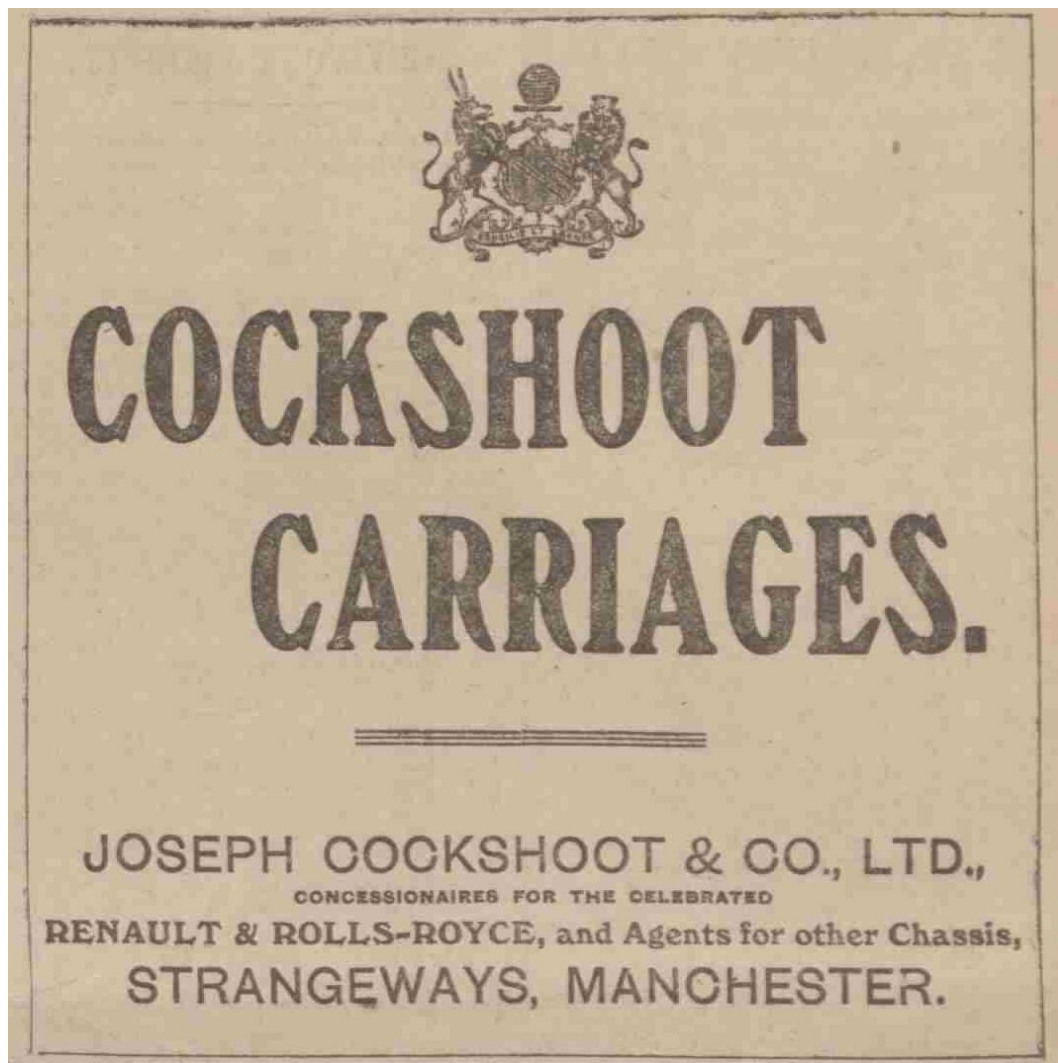


Figure 15 - Advert from the *Manchester Courier* 28/12/1909

Cockshoot in the interwar period: agency and sales

During the First World War Cockshoot produced bodies for Royal Flying Corps Crossley Tenders, a local motor manufacturer for whom Cockshoot had worked before.⁴⁴ However, in the interwar period the firm moved further away from coachwork and enhanced their role as motorcar agents. Up until 1914 Cockshoot produced 717 motorcar bodies, between 1920 and 1929 242, and between 1930 and 1939 as few as 68.⁴⁵ This follows a general trend in the coachbuilding industry as custom coachwork became less common with the majority of customers purchasing already finished motor cars. In the 1920s motor car bodies were made as part of the production processes or outsourced to local coachbuilders, however in the 1930s bodies began to be made from pressed steel which saw a decline in coachbuilding skills (Lyddon, 1987,

pp.585-6). There were a few exceptions. Firms like Hooper's in London built nearly as many motor car bodies in the 1930s as the 1920s; however after the Second World War they too saw a decline in custom body orders (Brooks, 1979, 09009).

Cockshoot continued their association with Rolls-Royce into the interwar period making the occasional body and acting as regional agent. However key to their survival and prosperity was their relationship with Morris, one of the three successful mass producers of the era. The first agency agreement with Morris was signed in September 1919 for a modest 50 cars.⁴⁶ However, as Figure 8 shows the number of cars being supplied to Cockshoot was as high as 2,200 by 1925. This boom in sales coincided with the rapid rise in fortune for Morris, who became Britain's market leader in 1923. It also shows the importance of gaining an agency for a popular car. A rise in car sales necessitated the opening new showroom in St. Anne's Square in 1927, increasing their potential. The first Morris Minor was delivered to the show room, advertised as the first £100 car in 1930. John Norris remarked from memory that 'within minutes the showroom was almost besieged by people wanting to see this new, cheap car' (Brooks, 1979, 09009).

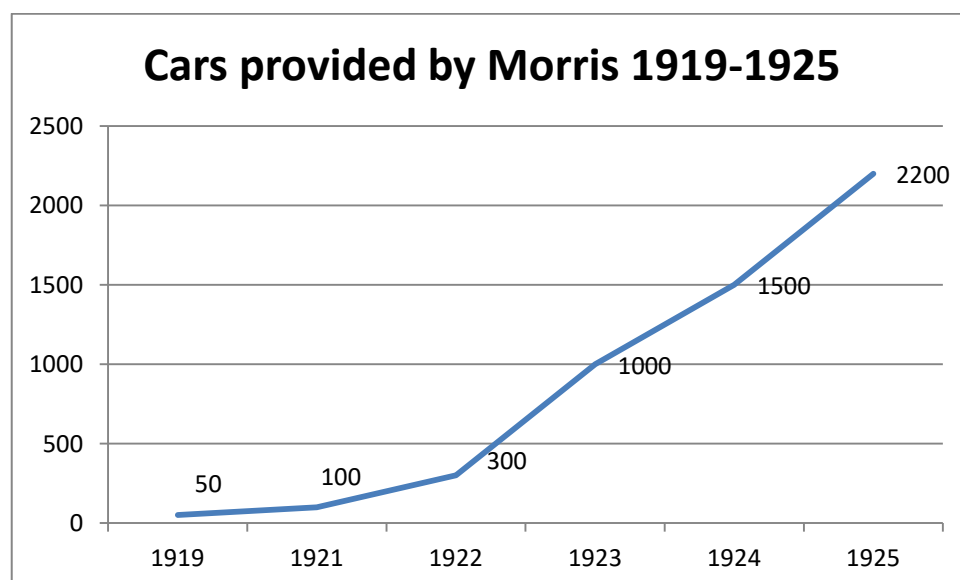


Figure 16 - Data from Cockshoot surviving dealership agreements YMS 0197/1/2

By 1924 with the number of cars taken by Cockshoot rapidly increasing the agreement changed to include much more detail for sub-dealers, including rates of commission

and rules of appointment. Whilst Cockshoot had the agency for East Lancashire and Cheshire, they were based solely in the city centre until after the Second World War. So they relied on sub-dealers in the towns outside of Manchester. The agreement for the 1939 season described Cockshoot as 'distributors', overseeing the appointment of 'dealers' and 'retail dealers'. There was a small fleet of nine demonstration models available and Cockshoot and its partnered dealers were selling 4000 of the various Morris vehicles a year. The contract also included increased advertising stipulation. No longer was it good enough to put up a sign outside, as per the 1919 agreement; 10 shillings per vehicle sold had to be spent on advertising by various means, reflecting an increased control over dealer operations from the start of the interwar period.⁴⁷

At the back of each completed agreement, there was a schedule or 'estimate of distributor's monthly requirements of vehicles'. What is most striking, when these are filled in, is the difference between the schedules of the 1920s and those of the late 1930s. In the 1920s there is clear seasonal variation, with Cockshoot estimating higher sales of vehicles in the spring and early summer, with a big drop off in the autumn and winter months. For example, in the schedule for the 1923 season 43 cars were ordered for autumn and 102 for the summer.⁴⁸ By 1939 there is very little seasonal variation in Cockshoot's estimate of requirements with the biggest variation being 304 in August, compared to 355 in May.⁴⁹ This shows how Cockshoot catered for a changing car culture, as motoring became all year round activity. The Oxford and Cowley models sold in the 1920s were seen as summer touring cars, whereas the Morris cars of 1939 were designed for comfort in all weathers, also reflecting the change from open coachbuilding to mass produced pressed steel enclosed bodies.

So quick was the decline in Cockshoot's motor car bodybuilding that Brian Norris remarked of the 1930s that 'We just kept on the coachbuilding side of the business to keep the old men happy. If ever it had been subject to cost analysis, we would have had a fit.' (Brooks, 1979, 09015). However the success of motor car sales and the relationship with Morris secured the survival of the coachbuilding firm. Figure 9 shows the profit made throughout the interwar period, with the exception of the period around 1930. Notable also is the larger interwar profits compared to those of 1903-1914.

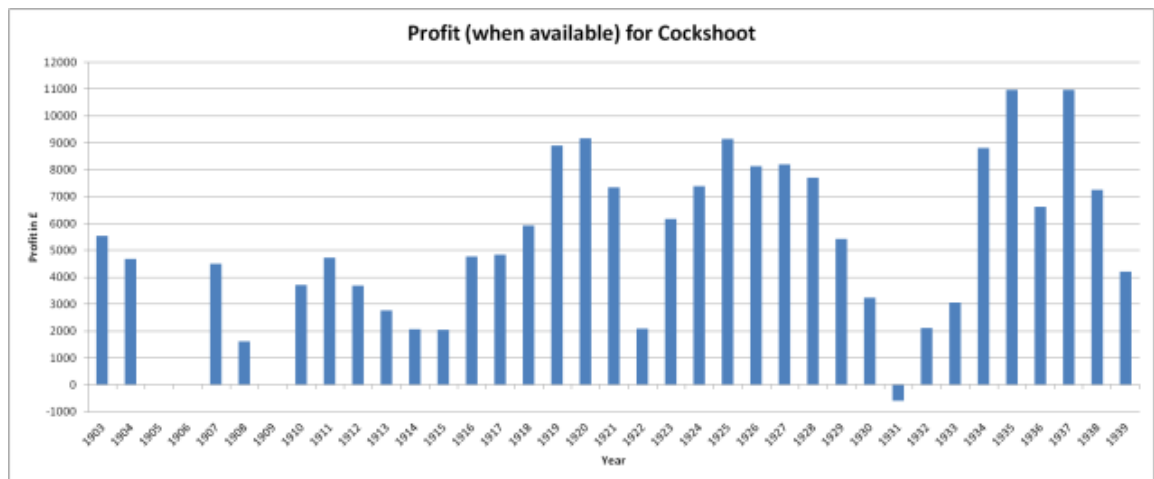


Figure 17 - Data gathered from profit and loss accounts YMS 0196/3/1-46. Data from 1905-6 and 1909 are missing

Conclusion

This paper has challenged the idea that the move from the carriage to the car was one of simple technological progression, or that the carriage trade and use of horse-drawn transport rapidly declined soon after the arrival of the automobile in a predictable uniform fashion. The case study of a Manchester coachbuilder Joseph Cockshoot and Company has highlighted aspects of this transitional period, including some rather stark contradictions. Most striking of which was the end of Cockshoot's involvement in the carriage trade in 1907, two years before local rival Anne Cowburn had even opened a motor department to sell motor cars. While building motor car bodies might be more natural for coachbuilding firms as demand increased for motor cars, the decisions over agencies, and the entry into mechanical engineering was much more alien, and included substantial risk. A study of the firm has also shown the importance of relationships both with the customer, and with the automobile manufacturer that went beyond the building of a motor car body; included the ordering of spare parts, dealing with all kinds of customer requests, the arrangement of sub-dealerships, advertising, repairing and demonstrating the manufacturers products.

Above all I hope this paper has impressed the need for a detailed study of the transitional period between the horse-drawn vehicle and the automobile in the UK that would complement those that exist from other countries. While this paper has looked at an upper-class coachbuilder due the survival of particular archive material,

similar case studies of wagonbuilders, cartbuilders and wheelwrights would almost certainly provide an interesting and insightful contrast which would further highlight the complexities of the era.

¹ The Cockshoot collection, YMS 0197/8/5/9

² T. A. Kinney, 2004, *The Carriage Trade*, (Baltimore: John Hopkins Press) p.298

³ J. Foreman-Peck, S. Bowden and A. McKinley, 1995, *The British Motor Industry*, (Manchester: Manchester University Press); R. Church, 1995, *The rise and decline of the British motor industry*, (Cambridge: Cambridge University Press)

⁴ G. Mom, 2015, *Atlantic Automobilmism Emergence and Persistence of the Car, 1895-1940*, (New York: Berghahn); C. Reid, 2015, *Roads Were Not Built For Cars*, (Washington: Island Press); P. Merriman, 2012, *Mobility, Space and Culture*, (Abingdon: Routledge)

⁵ There have been little research on the UK carriage trade, however there are studies on other countries including Kinney, 2004 for the USA and Sue-Yen Tjong Tjin Tai, 2015, 'Building Carriage, Wagon and Motor Vehicle Bodies in the Netherlands: The 1900-40 Transition', *The Journal of Transport History* Vol. 36:2

⁶ N. Georgano, 2001, 'History of Coachbuilding' in N. Georgano ed., *The Beaulieu Encyclopedia of the Automobile: Coachbuilding*, (Chicago: Dearborn) pp.3-64

⁷ T. Barker and D. Gerhold, 1993, *The rise and rise of road transport 1700-1990*, (Cambridge: Cambridge University Press) pp.56-61

⁸ The exception to this is their analysis of London public transport Barker and Gerhold (1993) p.57; and there analysis of freight transport p.61

⁹ Anonymous, 1917, *Census of England and Wales 1911: General Report with Appendices* (London: His Majesty's Stationery Office) pp.110-112

¹⁰ Ibid. pp.110-112

¹¹ Ibid. pp.110-112

¹² Ibid. pp.110-112

¹³ D. Lyddon, 1987, *Craft Unionism and Industrial Change: a Study of the National Union of Vehicle Builders Until 1939* (University of Warwick: PhD thesis) p.180; Baker and Gerhold (1993) p.54 show that tram traffic in London increased from 280 million journeys in the 1890s to 812 million in 1913-1914.

¹⁴ Anonymous, 1927, *Census of England and Wales 1921: General Report with Appendices* (London: His Majesty's Stationery Office) pp.93-117

¹⁵ *The Engineer* 18/6/1897 p.625

¹⁶ YMS 0196/3/6

¹⁷ M. Watney, 1961, *The Elegant Carriage*, (London: Allen) p. 17

¹⁸ *The Autocar* 20/4/1907 p.15

¹⁹ As noted in YMS 0196/3/6

²⁰ YMS 196/1/9/25 *The Story of a Centenary of Service to Travellers by Road* (1944) Unknown author

²¹ Norris's short typed history on the Deangate 'Arches' – YMS 0197/3/3/2

²² YMS 0197/8/5/9

²³ Catalogue for Wembley exhibition 1924, YMS 0197/6/2

²⁴ Advert for these first appears in *The Autocar* 8/2/1903

²⁵ YMS 0197/3/3/2 The Manchester Motor Car Corporation was formed in 1899 and was probably the first garage in Manchester *The Autocar* 18/2/1899

²⁶ YMS 0197/3/3/2

²⁷ There are numerous small articles on F. Wilkinson and Co. in the early trade journals. For example, *The Motor-Car Journal* 15/3/1902 p.33

²⁸ B. Beaven, 1994, *The Growth and Significance of the Coventry Car Component Industry, 1895-1939* (De Montford University: PhD Thesis) p.46

²⁹ In 1901 and 1902 the firm had made 7 motor car bodies, R. Brooks, *Motor Car Coachwork by Cockshoot of Manchester*, (Manchester: M. Sc. Dissertation 1979) 09002. Dissertation held at Museum of Science and Industry: YMS 1996/535

³⁰ YMS 0197/6/3

³¹ YMS 0197/3/3/2

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- ³² *Manchester Courier* 30/6/1909
- ³³ Clarke, 2002, *Hollingdrake, coachbuilders: a century in Stockport*, (Unpublished)
- ³⁴ YMS 0197/3/3/2 Newspaper cutting from 1903
- ³⁵ YMS 196/5/1/1
- ³⁶ YMS 0196/5/1/9 – The surviving book of heraldry documented repeated jobs
- ³⁷ Forthcoming publication by C. Horner on Cheshire vehicle registrations.
- ³⁸ J. S. Scharff, 1991, *Taking the Wheel*, (New York: Macmillan) pp.25-26
- ³⁹ Ibid.
- ⁴⁰ *Manchester Courier* 24/2/1906
- ⁴¹ This correspondence was recorded in Brooks, (1979) 08025-08059, it is part of a private collection.
- ⁴² For example, *Manchester Courier* 1/8/1903 and *The Autocar* 7/2/1903 Advertising supplement p.17
- ⁴³ *The Autocar* 4/1/1902
- ⁴⁴ YMS 196/5/2/1/4
- ⁴⁵ Brooks (1979) 09002 graphed the number of bodies produced data taken from complete records of bodies YMS 0196/5/1/1
- ⁴⁶ YMS 0196/1/2/5
- ⁴⁷ YMS 0196/1/2/12
- ⁴⁸ YMS 0196/1/2/7
- ⁴⁹ YMS 0196/1/2/12